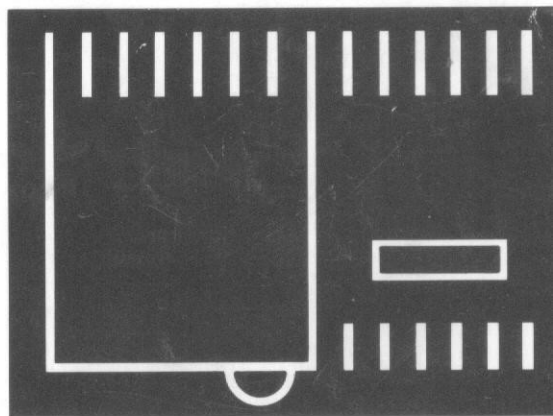


brother®



PDC100

PRO DISK COMPOSER

USER'S GUIDE

Thank you for purchasing the brother PDC-100 Pro Disk Composer. The PDC-100 is a MIDI sequencer that can be connected to various MIDI instruments (synthesizer, electronic piano, sound module, etc.), allowing you to record, edit, and playback music.

To ensure long and trouble-free use, and to take full advantage of the functions of the PDC-100, please read this manual carefully, and keep it for future reference.

All users should read chapters 1 and 2. Chapter 1 explains how to use the controls of the PDC-100, and how its functions are organized. Chapter 2 explains how to record a song, play it back, and save your song data to a floppy disk. These first two chapters will give you a basic idea of the possibilities of the PDC-100.

Chapters 3 — 11 explain all of the functions of the PDC-100 in detail. You can read these chapters when you are ready to learn more.

If the PDC-100 encounters an unexpected operation or situation, it will display a warning message or an error message. Chapter 12 explains the meaning of each message.

If you are synchronizing the PDC-100 with another MIDI sequencer or a MIDI drum machine, you may wish to refer to chapter 14.

Federal Communications Commission Compliance Notice (For U.S.A. only)

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specification in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient the receiving antenna
- relocate the equipment with respect to the receiver
- move the equipment away from the receiver
- plug the equipment into a different outlet, so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions.

Precautions

LOCATION

Do not use or leave the PDC-100 in the following locations.

- In direct or strong sunlight.
- In a very humid or very dry place.
- In a very hot or very cold place.
- In a dusty place.
- In a place of heavy vibration.
- Near an object that produces a magnetic field, such as a TV or speaker.

POWER SUPPLY

Use only a power adaptor that was designed exclusively for use with the PDC-100. Do not plug the power adaptor into an outlet that is being used by another device which requires a large amount of power or which may generate electrical noise.

MIDI CABLE

You may use any MIDI cable to connect the PDC-100 with your instrument.

HANDLING

Handle the PDC-100 with care. Applying excessive force to the switches will cause malfunctions.

CLEANING

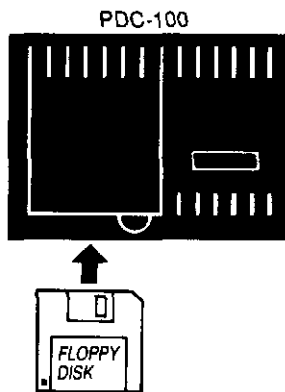
Use a soft dry cloth to clean the PDC-100. Never use solvents such as benzine or thinner.

FLOPPY DISK

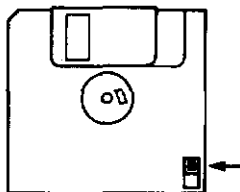
Use only 3.5" single-sided double-density (1DD) or double-sided double-density (2DD) disks in the PDC-100.

Handle floppy disks carefully.

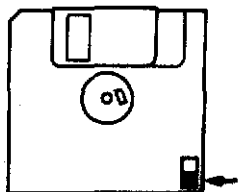
- Insert the disk into the disk drive with the label facing up and the metal shutter toward the PDC-100. Gently push the disk in until it clicks into place.
- To eject the disk, press the eject button located beneath the disk drive.
- Do not open the metal shutter or touch the surface of the disk directly.
- Do not use or leave a disk near objects that produce a magnetic field, such as speakers or TV sets.
- Do not use or leave a disk in direct sunlight, or a hot or dusty location.
- Do not use a warped or damaged disk, which may damage the read/write head, become stuck in the disk drive, or cause an error in reading or writing data.
- Affix a label to the disk in the correct location. Before inserting the disk into the drive, make sure that the label is firmly affixed to the disk.
- Do not attempt to remove the disk from the drive or turn off the PDC-100 while the access lamp is lit. Doing so may damage the data on the disk.
- For important data, make backup disk copies by saving the data onto more than one disk.
- To prevent important disk data from being accidentally erased, "write protect" the disk.



When the tab is covering the hole, data can be written to the disk.



When the hole is open, data can neither be written to nor erased from the disk.



Features

The PDC-100 is a MIDI sequencer/data filer that can be connected to various MIDI instruments (synthesizer, electronic piano, sound module, etc.), allowing you to record, edit, and playback music.

1. The PDC-100 provides 32 tracks for recording and playback. Each track can contain up to 16 independent MIDI channels of data, or if desired may be assigned to transmit all data on a single specified MIDI channel. Playback of individual tracks can also be turned on or off.

In addition to the 32 tracks, the PDC-100 provides 64 units. Each unit can contain up to 100 measures. Units can be freely inserted into tracks. When creating a song that contains repeated sections or motifs, units can be used to make efficient use of the available memory, and also to speed up composition.

2. The internal memory holds one song file of up to approximately 21,000 notes. The built-in 3.5 inch floppy disk drive allows you to save up to 32 song files. (maximum total approximately 39,400 notes) on a disk.
3. Three types of recording are provided. Realtime recording allows you to simultaneously record 16 MIDI channels into one track or unit. Step recording allows you to rapidly input notes or chords one by one from an external keyboard. Punch recording allows you to re-record a specified area of measures in a previously recorded track or unit.
4. A wide variety of editing functions are provided. In addition to event editing, bar editing, and quantization, you can use the modify function to modify all occurrences of a specified type of MIDI message by track or unit in one operation.
5. The display function allows you to monitor all incoming MIDI messages. This is very convenient for checking whether MIDI messages are actually being received, and for viewing the data in each incoming message.
6. In addition to the built-in beep metronome sound, MIDI messages can be transmitted at regular intervals to provide a metronome sounded on an external MIDI keyboard, drum machine or sound module.
7. Since the PDC-100 is able to record and playback system exclusive data, it can be used as a MIDI data filer, allowing you to store sound data for a synthesizer, pattern data for a drum machine, or any other type of MIDI bulk data.

Table of contents

1. Introducing the PDC-100	1
1.1 Front and rear panel	1
1.2 Key operations	3
1.3 Memory structure	5
1.4 Function structure	6
2. How to use the PDC-100	7
2.1 Basic operation	7
2.2 Advanced operation	13
3. [NORMAL] mode	17
4. [TRACK SELECT] mode	18
5. [RECORD SET UP] mode	19
5.1 Set Up Track	20
5.2 Set Up Unit	21
6. [DISK] mode	22
6.1 Load	23
6.2 Save	24
6.3 Delete	25
6.4 Chain Play	26
6.5 Preset	27
6.6 Format	28
7. [FILTER] mode	29
7.1 Receive Command Filter	30
7.2 Receive Channel Filter	31
7.3 Receive Channel Assign	32
7.4 Transmit Transpose	33
7.5 Transmit Command Filter	34
7.6 Transmit Channel Filter	35
7.7 Transmit Channel Assign	36
8. [SYSTEM] mode	37
8.1 Clock	38
8.2 Metronome	39
8.3 Others	40
9. [INITIALIZE] mode	42
9.1 Song Initialize	43
9.2 Track Initialize	44
9.3 Unit Initialize	45

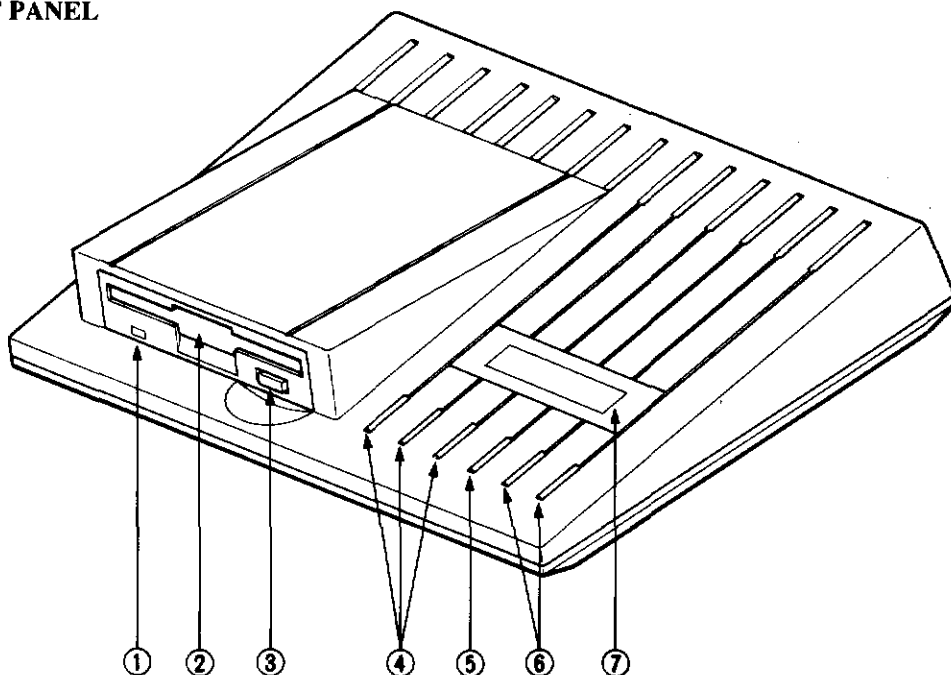
10. [EDIT] mode	47
10.1 Beat/Tempo Edit	48
10.2 Event Edit	50
10.3 Bar Edit	56
10.3.1 Bar Delete	57
10.3.2 Bar Insert	58
10.3.3 Bar Copy	59
10.3.4 Unit Place	61
10.4 Punch Recording	63
10.5 Step Recording	65
10.6 Quantize	68
10.7 Modify	70
 11. [DISPLAY] mode	 77
 12. Messages	 79
12.1 Warning messages	79
12.2 Error messages	80
 13. Specifications	 81
 14. MIDI implementation	 82
14.1 Transmission	82
14.2 Reception	83

MIDI implementation chart

1. Introducing the PDC-100

1.1 Front and rear panel

FRONT PANEL



① ACCESS LAMP

This lamp will be lit while the PDC-100 formats the disk, saves data to the disk, or loads data from the disk.

CAUTION: Never remove the disk or turn the power off while this lamp is lit.

② DISK DRIVE

Insert a 3.5" floppy disk into this drive.

③ EJECT BUTTON

Press this button to remove the disk.

④ FUNCTION KEYS

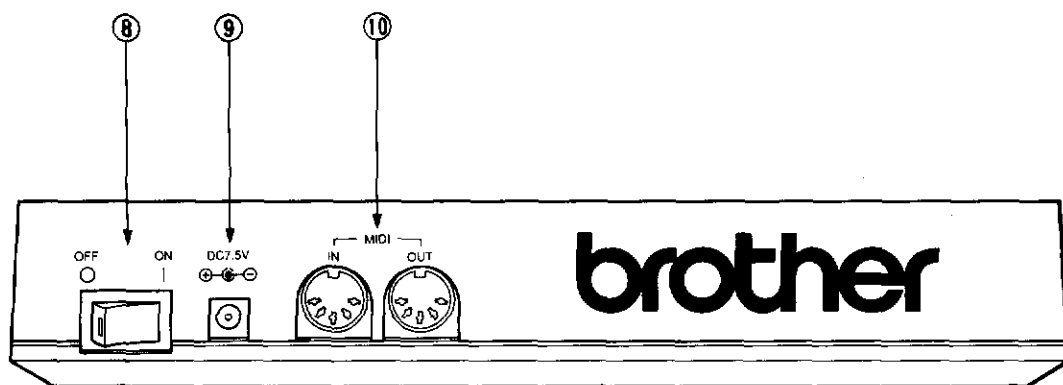
⑤ SHIFT KEY

⑥ MODE KEYS

⑦ DISPLAY

Various information is displayed in this 16 character 2 line backlit LCD.

REAR PANEL



⑧ POWER SWITCH

⑨ DC IN

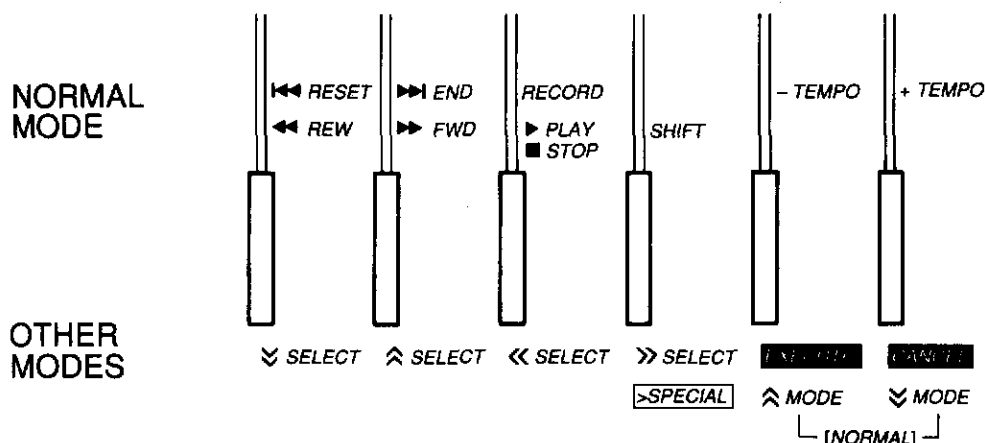
Plug the AC adaptor into this terminal.

⑩ MIDI PORTS

MIDI messages are received at the IN port and transmitted from the OUT port.

1.2 Key operations

The PDC-100 has three function keys (black), one shift key (green), and two mode keys (grey). As shown in the following diagram, the function of these keys will differ depending on whether the PDC-100 is in normal mode or in another mode.



Normal mode

When pressed by itself, each key will perform the function printed on the panel in grey. When pressed while holding the SHIFT key, each key will perform the function printed on the panel in green.

- ▶ **PLAY** begin or stop playback
- **STOP**
- ▶▶ **FWD** move the location point one measure forward
- ◀◀ **REW** move the location point one measure backward
- RECORD** begin realtime recording
- ▶▶ **END** move the location point to the last measure + 1
- ◀◀ **RESET** move the location point to the first measure
- +TEMPO** make the tempo faster
- TEMPO** make the tempo slower

(To reset the tempo to the initial setting (♩ :120), simultaneously press the three keys **SHIFT**, **+TEMPO**, and **-TEMPO**.)

Other modes

In modes other than [TRACK] mode and [DISPLAY] mode, a special display can be accessed. (A ">" displayed in the lower right of the LCD indicates that a special display is available.) To enter the special display, press the **>SPECIAL** key. While in a special display, the **^ MODE** and **v MODE** keys will function as **EXECUTE** and **CANCEL**. To leave the special display press the **CANCEL** key.

v MODE select a mode downward

^ MODE select a mode upward

>SPECIAL when a ">" is displayed in the lower right of the LCD, enter the special display

>> SELECT select the item you wish to set

<< SELECT select the item you wish to set

^ SELECT modify the setting of the selected item

v SELECT modify the setting of the selected item

EXECUTE press this key to execute the operation (for example when rewriting or initializing data, or executing a disk function). When you press this key the first time, the LCD will ask "Execute?". To execute the operation, press the key once again.

CANCEL press this key to exit the special display, or to leave the "Execute?" display without executing

[NORMAL] simultaneously press the two **MODE** keys to return to [NORMAL] mode

1.3 Memory structure

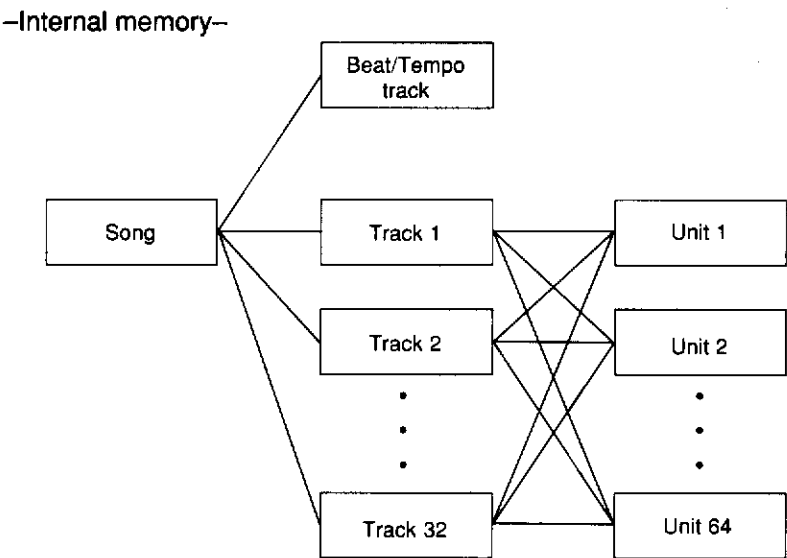
Internal memory

The internal memory of the PDC-100 can accommodate one song of up to approximately 21,000 notes. The song consists of 32 tracks, and a beat/tempo track that contains time signature and tempo data. In addition to the tracks, 64 “units” are provided. Units can be inserted anywhere in a track.

Song data recorded into internal memory can be saved onto a 3.5 inch floppy disk. A floppy disk can store up to 32 song files, within a total of approximately 39,400 notes.

The internal memory of the PDC-100 is not backed up. When you turn the power off, all contents of the memory will be lost. We suggest that you frequently save important song data to disk.

The filter and system settings in memory are not backed up either, but you can save them to disk as preset data. If a disk is already inserted when the PDC-100 is turned on, this preset data will automatically be loaded from disk, restoring the previous settings.



1.4 Function structure

The functions of the PDC-100 are grouped in the following nine modes. Most modes have SPECIAL displays that allow you to enter the desired function to make settings or to execute an operation.

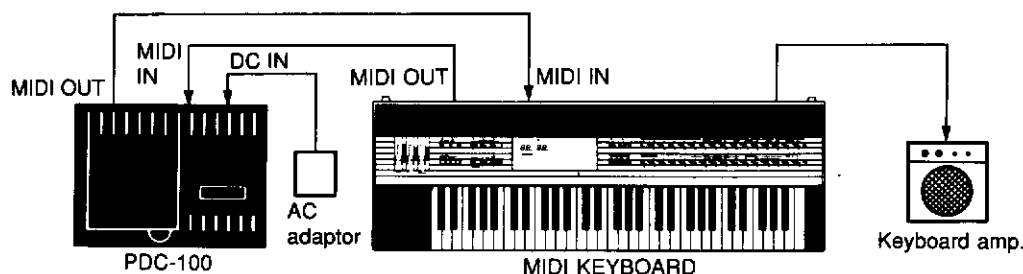
	Mode	SPECIAL displays
1	[NORMAL] playback and realtime recording	
2	[TRACK SELECT] select the track(s) to playback	
3	[RECORD SET UP] select the track or unit to record	Track Unit
4	[DISK] access the floppy disk	Load Save Delete Chain Play Preset Format
5	[FILTER] specify MIDI message reception/transmission filtering and channel assignment	Rcv Command Rcv Channel Rcv Ch Assign Tmt Transpose Tmt Command Tmt Channel Tmt Ch Assign
6	[SYSTEM] PDC-100 system settings for clock, metronome, etc.	Clock Metronome Others
7	[INITIALIZE] initialize a song, track, or unit	Song Track Unit
8	[EDIT] edit data	Beat/Tempo Event Edit Bar Edit Punch Rec Step Rec Quantize Modify
9	[DISPLAY] display the MIDI messages being received	

2. How to use the PDC-100

2.1 Basic operation

As an example of one of the most common ways to use the PDC-100, this section will explain how to connect a synthesizer to the PDC-100, and record and playback the accompaniment on track 1 and the melody on track 2.

(1) Example connections



1. Turn off the power of the PDC-100 and synthesizer.
2. Connect the plug of the AC adaptor to the PDC-100 DC input.
3. Use two MIDI cables to connect the MIDI OUT of the PDC-100 to the MIDI IN of the synthesizer, and the MIDI OUT of the synthesizer to the MIDI IN of the PDC-100.
4. Turn on the power of each device.

(2) Initialize the song

Set the beat and tempo while initializing the internal memory. When the power is turned on, the PDC-100 will be in [NORMAL] mode.

```
T01 100%  
M001-1 4/4 ♪:120
```

Press the **MODE** key three times to select [INITIALIZE] mode. At this time, make sure that ① indicates "Song". You can use the **SELECT** key and **SELECT** key to set ① to Song, Track, or Unit.

```
[INITIALIZE]  
Song >  
①
```

Press the **>SPECIAL** key to enter the SPECIAL display.

```
INITIALIZE SONG  
Beat:4/4 ♪:120  
② ③
```

Here we will set beat ② and tempo ③. For this example, we will use a time signature of 4/4 and a tempo of ♩ =126. Press the **» SELECT** key and move the cursor to ③. Then use the **^ SELECT** key to modify the value to 126.

INITIALIZE	SONG
Beat: 4/4	♩ : 12 <u>6</u>

When you press the **EXECUTE** key, the display will ask "Execute?".

INITIALIZE	SONG
-	Execute ? -

If you are sure you have made the settings correctly and want to execute, then press **EXECUTE** once again, and the song will be initialized. If you wish to change the settings you have made, press **CANCEL** instead. You will return to the previous display, and can make settings again.

INITIALIZE	SONG
-	EXECUTE ! -

When initialization is complete, the **SPECIAL** display will automatically be exited.

[INITIALIZE]
Song >

***Note :** When the PDC-100 power is turned on, it will be set to a beat of 4/4 and a tempo of ♩ =120. If you record without performing this Initialize Song operation, the song will be recorded with this beat and tempo. When you execute the Initialize Song operation, all tracks and all units will be initialized to an unrecorded (blank) condition.*

(3) Record the accompaniment

Next we will record the accompaniment. Simultaneously press the **∨ MODE** key and the **^ MODE** key to return to [NORMAL] mode. (You can also return to [NORMAL] mode by using the **∨ MODE** key and **^ MODE** key to step through the modes.)

	①	②
	T01	100%
M001-1	4/4	♩ : 126
③	④	

Make sure that ① indicates T01 (track 1). If not, go to [RECORD SET UP] mode and select track 1. (see page 19)

② indicates the remaining amount of internal memory, ③ the location point (measure), and ④ the location point (beat).

Now we will begin recording. While holding the **SHIFT** key, press the **RECORD** key. The PDC-100 will begin a two-measure countdown.

<COUNT>	T01	100%
M(2)-1	4/4	♩ : 126

When the display reaches M(1)-4, you may begin playing your song from the next beat. As you continue playing, the location point will advance to indicate the current position in the song. If you wish to hear the metronome, turn it on in [SYSTEM] mode (see p.39).

<RECORD> T01 99%
 M001-1 4/4 ♩:126

When you finish playing, press the ■ STOP key to stop recording.

T01 082%
 M022-1 4/4 ♩:126

(4) Play back the accompaniment

Next we will check that the accompaniment was recorded correctly. The location point now shows the place where you stopped recording, so while holding the SHIFT key press the ⏮ RESET key to move back to the beginning of the song.

T01 082%
 M001-1 4/4 ♩:126

Press the ► PLAY key and playback will start.

Note : If playback does not occur, it is possible that MIDI data was not received by the PDC-100. Use [DISPLAY] mode to check whether MIDI data is being received by the PCD-100 when you play your synthesizer. (see page 77)

<PLAY> T01 082%
 M003-2 4/4 ♩:126

(5) Select a different track for recording

Next we will select track 2 for recording. Press the ⌘ MODE key twice to select [RECORD SET UP] mode.

At this time, make sure that ① displays Track.

You can use the ⌘ SELECT key and the ⤴ SELECT key to set ① to either Track or Unit.

[RECORD SET UP]
 Track ① >

①

Press the >SPECIAL key to enter the SPECIAL display.

RECORD:T01
 1-----

③

② indicates the track selected for recording, and ③ will display either a number to indicate that the track has been recorded, or a dash “-” to indicate that the track has not yet been recorded. Press the **⤴ SELECT** key to set ② to T02 (track 2). Then press the **CANCEL** key to exit the SPECIAL display.

[RECORD SET UP]
 Track >

(6) Record the melody

Next we will record the melody. Simultaneously press the **⌘ MODE** key and the **⤴ MODE** key to select [NORMAL] mode.

①
 T02 082%
 M001-1 4/4 ♪:126

Make sure that ① indicates T02 (track 2). Next, record the melody in the same way as you did for the accompaniment. You will hear the accompaniment play back, so play along and record the melody.

T02 068%
 M022-1 4/4 ♪:126

(7) Play back the accompaniment and melody

While holding the **SHIFT** key press the **⏮ RESET** key to move back to the beginning of the song.

T02 068%
 M001-1 4/4 ♪:126

Press the **▶ PLAY** key, and the accompaniment and melody will be played back. If you wish to play back only one of the tracks, press the **⌘ MODE** key once to select [TRACK SELECT] mode.

[TRACK] T01 01-16
 12-----

①

① indicates the track playback mode by displaying a number if the track will be played back, or a dash “-” to indicate that the track will not be played back.

Press the **⤵ SELECT** key or **⤴ SELECT** key to move the cursor to select the desired track, and press **⌘ SELECT** or **⤴ SELECT** to turn playback on or off. In this example we will turn off playback for track 1. Move the cursor to “1”, and press the **⌘ SELECT** key.

[TRACK] T01 01-16
 -2-----

Press the **⤴ MODE** key to select [NORMAL] mode.

T02 068%
 M001-1 4/4 ♪:126

Press the ► PLAY key and track 2 will play back alone.

```
<PLAY>   T02 068%  
M005-2  4/4  ♩:126
```

(8) Initialize a floppy disk on which to save the song

The internal memory of the PDC-100 is not preserved when the power is turned off. This means that if you turn the power off now, your song will be lost forever. If you wish to save your song for playback or further recording or editing at a later date, you must save it to disk.

Before a newly purchased floppy disk (or a disk that has already been used by another device) can be used by the PDC-100, it must be formatted by the PDC-100. If the disk has already been formatted by the PDC-100, there is no need to format it again. **Formatting will erase all data that exists on the disk. Do not format disks with data you want to keep.**

To format a floppy disk, make sure that the write protect tab of the disk is in the Write Permit position (the hole is covered), and insert it into the PDC-100 disk drive. Then press the ✓ MODE key three times to select [DISK] mode.

The following display will appear.

```
[DISK]
Load >
```

①

Press the ^ SELECT key five times to select "Format" as the disk operation ①.

```
[DISK]
Format >
```

Press the >SPECIAL key to enter the SPECIAL display.

```
FORMAT
(Disk Init.)
```

To format the disk, press the EXECUTE key. The display will ask "Execute?".

```
FORMAT
- Execute ? -
```

Remember that formatting will destroy any data that was previously on the disk, so make sure that the disk does not contain any important data. (Press CANCEL if you decide not to format the disk.) If you are sure you want to format the disk, press EXECUTE once again, and formatting will begin.

②

```
FORMAT      010%
- EXECUTE ! -
```

While the disk is being formatted, the disk drive access lamp will light, and the display ② will show a progress report. When formatting is complete, the SPECIAL display will automatically be exited.

```
[DISK]
      Format >
```

Now we will save the song data to the disk. Press **✓SELECT** four times to select "Save" as the disk operation ①.

```
[DISK]
      Save >
      ①
```

Press **>SPECIAL** to enter the SPECIAL display.

```

      ③
SAVE      R100%
" _      "
      ④
```

The percentage in the upper right ③ shows the amount of available space remaining on the disk. You can enter a name for your song in ④. Use the **<<SELECT** key and **>>SELECT** key to move the cursor to left or right, and use the **✓SELECT** key and **^SELECT** keys to select characters.

```
SAVE      R100%
"PDC-100  "
```

When you have finished entering the song name, press the **EXECUTE** key. The display will ask "Execute?".

```
SAVE  -Execute? -
"PDC-100      "
```

If the song name has been entered correctly, press the **EXECUTE** key once again to save the song to disk.

Note : If you assign a song name that is the same as a song that has already been saved on that disk, the display will ask "Name OK?". If you then press **EXECUTE**, the old song data will automatically be deleted, and the new song data will be saved. If you wish to preserve the old song data, press the **CANCEL** key, modify the song name, and then save the song data.

```
SAVE  -EXECUTE! -
"PDC-100      "
```

While the data is being saved, the disk drive access lamp will light. When saving is finished, the SPECIAL display will automatically be exited.

```
[DISK]
      Save >
```

(9) Load the song from disk

Since you have not turned the power off yet, the song you recorded still exists in the internal memory of the PDC-100. If you do turn the power off now, your song in internal memory will be lost. However, since you have saved it to disk, it can be loaded back into the PDC-100 internal memory by the following procedure.

While in [DISK] mode, press the \vee SELECT key or \wedge SELECT key to get the Load function.

[DISK]

Load >

Press the **>SPECIAL** key to enter the SPECIAL display.

LOAD S002%

01.PDC-100

If the disk contains more than one song, you can use the \vee SELECT key and \wedge SELECT key to select the song you wish to load. Then press **EXECUTE**. The display will ask "Execute?".

LOAD -Execute?-

01.PDC-100

To load the song, press **EXECUTE** once again.

LOAD -EXECUTE!-

01.PDC-100

When loading is complete, the SPECIAL display will automatically be exited and the "Load >" display will reappear.

[LOAD]

Load >

Now you can return to [NORMAL] mode and playback, record additional tracks, or use the editing functions explained in the following chapters.

2.2 Advanced operation

As a more advanced example of using the PDC-100, this section will explain how to record a song with changing time signature and tempo as shown in the following diagram.

5/4 ♩=80 A			2/4 ♩=165 C		5/4 ♩=80 A			2/4 ♩=165 D		5/4 ♩=80 B	
M001	M002	M003	M004	M005	M006	M007	M008	M009	M010	M011	M012

The contents of the measures at location points M001, M005, and M010 are identical, and so are the measures at location points M002, M006, and M011, and the measures at M003 and M007.

In this example, we will assume that M001=M005=M010, M002=M006=M011, and M003=M007. The letters A, B, C, and D indicate patterns.

(1) Initialize the song

Before we begin recording, we will initialize the song. Since M001 of this song is in a time signature of 5/4 and a tempo of ♩ = 80, we will use the [INITIALIZE] mode function Song Initialize to modify the settings for ① and ②, and then press the **EXECUTE** key twice.

INITIALIZE	SONG
Beat: 5/4	♩: 080

① ②

(2) Make settings for the beat/tempo track

Since this song contains changes in time signature and tempo, we need to make settings for the beat/tempo track. In the [EDIT] mode function Beat/tempo Track Edit, set the location point ② to M004, which is where we want the beat and tempo to change.

②

CHG M004-1-00
-- No Data --

Set the edit operation ① to INS, and press the **EXECUTE** key twice. The beat data and tempo data will be inserted.

①

INS M004-1-00
Beat: 4/4 ♩: 120

Set the edit operation ① back to CHG, and set beat ③ to 2/4 and tempo ④ to ♩ = 165. This time there is no need to press the **EXECUTE** key.

①

CHG M004-1-00
Beat: 2/4 ♩: 165

③ ④

In the same way, insert and modify beat data and tempo data at location points M005, M008, and M010.

CHG M005-1-00
Beat: 5/4 ♩: 080

CHG M008-1-00
Beat: 2/4 ♩: 165

CHG M010-1-00
Beat: 5/4 ♩: 080

(3) Record some units

Although it is possible to immediately record all measures of the track in realtime while listening to the metronome, in this example we will create the song using units. Record using the following procedure.

1. Record pattern A for measures M001—M003 and M005—M007 in unit 1.
2. Record pattern C for measure M004 in unit 2.
3. Record pattern D for measures M008—M009 in unit 3.

Since M010—M012 is quite similar to M001—M003, we will copy unit 1 directly into the track and then use event editing to modify it, instead of recording it.

There are two ways to record; realtime recording and step recording. In this example we will use realtime recording. Before we record, we will use the Unit Initialize function in [INITIALIZE] mode. Set the unit number ① to U01 (unit 1), set the beat ② to 5/4, and set the unit bar length ③ to 003. Then press the **EXECUTE** key twice, and the unit will be initialized.

①

INITIALIZE	U01
Beat: 5/4	L: 00 <u>3</u>

② ③

In the same way, initialize unit 2 and unit 3.

INITIALIZE	U02
Beat: 2/4	L: 00 <u>1</u>

INITIALIZE	U03
Beat: 2/4	L: 00 <u>2</u>

Next, we will use [RECORD SET UP] mode to select U01 (unit 1) as the unit to be recorded ④.

④

RECORD: U0 <u>1</u> 01-16

Now return to [NORMAL] mode, and record unit 1 in realtime. In the same way, select unit 2 and then unit 3 for recording, and record them in realtime.

(4) Edit the track

Now that we have finished recording the units, we will place units 1—3 in track 1. In the [EDIT] mode function Bar Edit, set the edit operation ① to PLACE, the location point ② to M001, and the unit number ③ to U01 (unit 1). Then press the **EXECUTE** key twice, and the unit will be placed in the track.

① ②

PLACE	T01-M001
U0 <u>1</u>	(Available)

③

In the same way, place unit 2 at location point M004, unit 1 at M005, and unit 3 at M008.

PLACE	T01-M004
U02	(Available)

PLACE	T01-M005
U01	(Available)

PLACE	T01-M008
U03	(Available)

Next, set the edit operation ① to COPY, the location point ② to M010, the unit number ③ to U01 (unit 1), the top bar number ④ to M001, and the copy bar length ⑤ to L003. Then press the **EXECUTE** key twice, and unit 1 will be copied into track 1 for 3 measures starting at location point M010.

①	②
COPY	T01-M010
U01-M001	L003
③	⑤

In the [EDIT] mode function Event Edit, set the location point ① to M012, and use insert and delete to modify the data where it differs from M003.

①
CHG M012-1-00 C1
C+4 V127 L01-57

This completes our twelve-measure song in track 1. Return to [NORMAL] mode and play it back.

(5) Tempo change setting

In order for the tempo data we inserted in the Beat/Tempo track to have an effect, we must set Tempo Change to ON in the "Others" item of [SYSTEM] mode.

OTHERS
Tempo Chg.: ON

When the song is played back, the tempo will change automatically according to the tempo data in the Beat/Tempo track. Return to [NORMAL] mode and playback the song.

3. [NORMAL] mode

<Function> This is where you playback songs or units, and perform realtime recording of tracks or units. When the PDC-100 is turned on, it will be in this mode. If you wish to record, use [RECORD SET UP] mode to select the track/unit number to be recorded. When playing back a unit, you can also use [RECORD SET UP] mode to select the unit numbers to be played back.

①	②	③
<div style="border: 1px solid black; padding: 5px; text-align: center;"> <PLAY> T01 065% M001-1 4/4 ♩:120 </div>		
④	⑤	⑥ ⑦

NO.	Item	Setting or display	Meaning
①	Status	<PLAY> <COUNT> <RECORD>	stopped playing counting down before recording begins recording
②	Track/unit number	T01—T32 U01—U64	track number to record unit number to record/playback
③	Remaining memory	000%—100%	remaining amount of internal memory
④	Location point (measure)	M(8)—M(1) M001—	(countdown) (measure)
⑤	Location point (beat)	1—	(beat)
⑥	Beat	1/4—8/4	
⑦	Tempo	030—250	

<Operations>

Operation	Action
▶ PLAY	begin playing a song or unit
■ STOP	stop playback of a song or unit, or stop recording a track or unit
RECORD	begin realtime recording of a track or unit
▶▶ FWD	move the location point one measure forward
◀◀ REW	move the location point one measure backward
▶▶ END	move the location point to the last measure + 1
◀◀ RESET	move the location point to the first measure
∨ MODE	select a mode downward
∧ MODE	select a mode upward
+ TEMPO	make the tempo faster
- TEMPO	make the tempo slower

(To reset the tempo to the initial setting (♩ :120), simultaneously press the three keys **SHIFT**, **+TEMPO**, and **-TEMPO**.)

Note : The location point can be advanced only up to the end of the longest track or the last measure of a unit which is to be played back. It is not possible to advance the location point if nothing has been recorded yet.

4. [TRACK SELECT] mode

<Function> This mode allows you to check the playback status of each track. You can also specify the tracks to be played back during song playback or realtime recording. However it is not possible to set the playback status of an unrecorded track. When a track is recorded, it will automatically be set to play back.

		①	②
[TRACK] T01		01-16	
12345-7		-----12	--1516
		③	

NO.	Item	Setting or display	Meaning
①	Track number	T01—T32	the selected track number
②	Track group	01—16 17—32	the track group to display in ③
③	Track playback status	numeral (→Note) -	tracks with the number displayed will be played back will not be played back

(Note) Even when track group 17—32 has been selected, the track status in ③ will be displayed using numbers 1—16.

<Operations>

Operation	Action
» SELECT	move the cursor to the right to select a track number
« SELECT	move the cursor to the left to select a track number
^ SELECT	set the selected track to playback status
∨ SELECT	set the selected track to muted status
∨ MODE	select a mode downward
^ MODE	select a mode upward
[NORMAL]	return to [NORMAL] mode

5. [RECORD SET UP] mode

<Function> In this mode you can check the record status of tracks and units, and select the track or unit to be realtime recorded.

[RECORD SET UP]
Tracku >

①

NO.	Item	Setting or display	Meaning
①	Item to setup	Track Unit	

<Operations>

Operation	Action
⤴ SELECT	select track/unit
⤵ SELECT	select track/unit
>SPECIAL	enter the special display
⤵ MODE	select a mode downward
⤴ MODE	select a mode upward
[NORMAL]	return to [NORMAL] mode

5.1 Set Up Track

<Function> Check the record status of each track, and select the track to be newly realtime recorded.

① ②

RECORD: T05 01-16
123--6-----121314--

③

NO.	Item	Setting or display	Meaning
①	Track number	T01—T32	track number to record
②	Track group	01—16 17—32	track group to display in ③
③	Track record status	numeral (→ <i>Note</i>) -	tracks with the number displayed have been recorded unrecorded

(Note) Even when track group 17—32 has been selected, the track status in ③ will be displayed using numbers 1—16.

<Operations>

Operation	Action
» SELECT	select the track group to display
« SELECT	select the track group to display
^ SELECT	select the track number to record
v SELECT	select the track number to record
CANCEL	exit the special display

5.2 Set Up Unit

<Function> Check the record status of each unit, and select the unit to be newly realtime recorded. When you wish to edit, re-record or initialize a unit that has already been placed, and it causes a change in the length of the unit, you must first use the Bar Delete function to remove the unit from the track, then do what you wish to do, and finally place the modified unit in the track again.

	①	②
	RECORD: U38 01-16	
	12---6---11---	
	③	

NO.	Item	Setting or display	Meaning
①	Unit number	U01—U64	unit number to record/playback
②	Unit group	01—16 17—32 33—48 49—64	unit group to display in ③
③	Unit record status	numeral (→Note) -	units with the number displayed have been recorded unrecorded

(Note) Even when unit group 17—32, 33—48, or 49—64 has been selected, the unit status in ③ will be displayed using numbers 1—16.

<Operations>

Operation	Action
» SELECT	select the unit group to display
« SELECT	select the unit group to display
⤴ SELECT	select the unit number to record/playback
⤵ SELECT	select the unit number to record/playback
CANCEL	exit the special display

6. [DISK] mode

<Function> This mode provides disk-related functions.

The internal memory of the PDC-100 is not backed up, and all data will be lost when the power is turned off. If you wish to preserve the contents of internal memory, you must save the data, filter settings, system settings, etc. from internal memory to disk.

[DISK] Load >

①

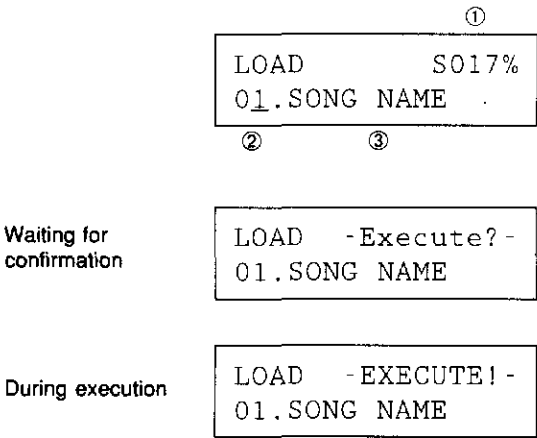
NO.	Item	Setting or display	Meaning
①	Disk operation	Load Save Delete Chain Play Preset Format	load song data save song data delete song data chain play load/save preset data initialize a disk

<Operations>

Operation	Action
⤴ SELECT	select the operation to execute
⤵ SELECT	select the operation to execute
>SPECIAL	enter the special display
⤵ MODE	select a mode downward
⤴ MODE	select a mode upward
[NORMAL]	return to [NORMAL] mode

6.1 Load

<Function> This function loads song data from disk into internal memory. The internal memory of the PDC-100 holds only one song at a time, so when you load a song from disk, the song previously in internal memory will be lost.



NO.	Item	Setting or display	Meaning
①	Disk capacity	S000%—S054%	amount of disk capacity used by song data
②	Song number	01—32 (→ <i>Note</i>)	a single disk can hold up to 32 song files
③	Song name		

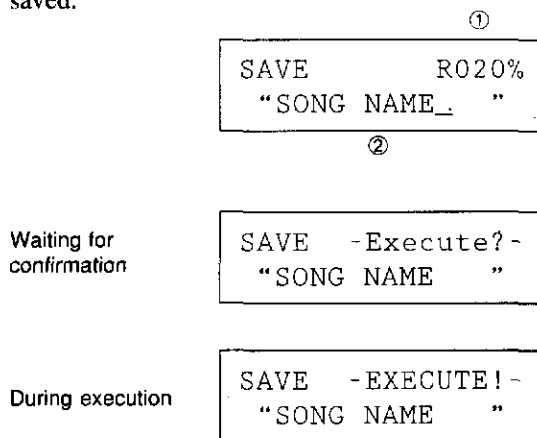
(Note) It is not possible to select a song number which does not contain a song.

<Operations>

Operation	Action
⤴ SELECT	select the song to load
⤵ SELECT	select the song to load
EXECUTE	execute loading
CANCEL	cancel loading, or exit the special display

6.2 Save

<Function> This function saves song data from internal memory to disk. You must assign a song name before you can save. If you assign a name that is identical to a song name that already exists on the disk, the old song data will automatically be deleted, and the new song data will be saved.



NO.	Item	Setting or display	Meaning
①	Remaining disk capacity	R000%—R100%	amount of remaining disk capacity
②	Song name		each song can be given a 12-character name

● The following characters can be input

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [¥] ^ _ `
 a b c d e f g h i j k l m n o p q r s t u v w x y z { | } → ←
 _ ! " # \$ % & ' () * + , - . /
 0 1 2 3 4 5 6 7 8 9 : ; < = > ? @

<Operations>

Operation	Action
» SELECT	move the cursor to the right
« SELECT	move the cursor to the left
⤴ SELECT	select the character at the cursor position
⤵ SELECT	select the character at the cursor position
EXECUTE	execute saving
CANCEL	cancel saving, or exit the special display

6.3 Delete

<Function> This function deletes a song from disk. When the disk is full, or when it already contains the maximum number of song files, you can use this Delete function to delete unwanted song data, making room to save your new song.

①

DELETE S022%
03.SONG NAME

② ③

Waiting for
confirmation

DELETE-Execute? -
03.SONG NAME

During execution

DELETE-EXECUTE! -
03.SONG NAME

NO.	Item	Setting or display	Meaning
①	Disk capacity	S000%—S054%	amount of disk capacity used by song data
②	Song number	01—32 (→Note)	a single disk can hold up to 32 song files
③	Song name		

(Note) It is not possible to select a song number which does not contain a song.

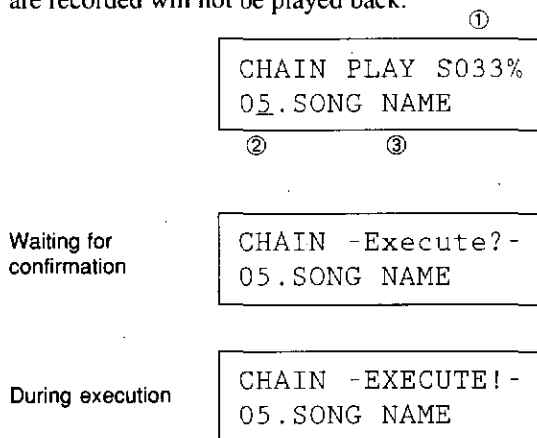
<Operations>

Operation	Action
⤴ SELECT	select the song to delete
⤵ SELECT	select the song to delete
EXECUTE	execute deletion
CANCEL	cancel deletion, or exit the special display

6.4 Chain Play

<Function> This function successively loads and plays songs from disk in the order of their song numbers. When executed, Chain Play will start playing from the currently selected song, and continue playing until the ■ STOP key is pressed or the disk is ejected.

Song files in which all tracks and units are unrecorded, or song files in which only units are recorded will not be played back.



NO.	Item	Setting or display	Meaning
①	Disk capacity	S000%—S054%	amount of disk capacity used by song data
②	Song number	01—32 (→Note)	a single disk can hold up to 32 song files
③	Song name		

(Note) It is not possible to select song numbers which do not contain a song.

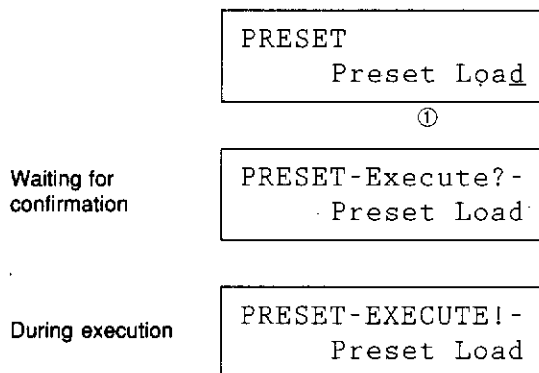
<Operations>

Operation	Action
⤴ SELECT	select the song from which chain play will begin
⤵ SELECT	select the song from which chain play will begin
EXECUTE	execute chain play (Note)
CANCEL	cancel chain play, or exit the special display

(Note) If ■ STOP is pressed or the disk is removed during playback, chain play will end.

6.5 Preset

<Function> This function saves filter or system settings as preset data to disk, or loads them from disk. Only one type of preset data can be stored on a single disk. If a disk is inserted when the PDC-100 is turned on, preset data will automatically be loaded from the disk, restoring the filter and system settings.



NO.	Item	Setting or display	Meaning
①	Type of preset	Preset Load Preset Save	load preset data save preset data

<Operations>

Operation	Action
⤴ SELECT	select load/save
⤵ SELECT	select load/save
EXECUTE	execute load/save
CANCEL	cancel load/save, or exit the special display

6.6 Format

<Function> This function formats a disk for use by the PDC-100. At the same time, it saves the preset data.

When Format is executed, all data that was previously saved on that disk will be lost.

```

FORMAT
(DISK Init.)
  
```

Waiting for
confirmation

```

FORMAT
- Execute ? -
  
```

During execution

①

```

FORMAT          020%
- EXECUTE ! -
  
```

NO.	Item	Setting or display	Meaning
①	Progress status	000%—100%	percentage of progress (→Note)

(Note) Approximately 10 seconds of processing will occur before the 0% and after the 100%.

<Operations>

Operation	Action
EXECUTE	execute formatting
CANCEL	cancel formatting, or exit the special display

7. [FILTER] mode

<Function> In this mode you can set MIDI transmission and reception filters, specify channel assignments, transposition, etc.

Transmit channel assignments are saved to disk as part of the data for each song. Other settings can be saved to disk as preset data, but only one set of preset data can be saved on a single disk. If a disk is inserted when the PDC-100 power is turned on, the preset data will automatically be loaded, and the filters will be set accordingly.

```

FILTER
  Rcv Command >
  
```

①

NO.	Item	Setting or display	Meaning
①	Filter operation	Rcv Command Rcv Channel Rcv Ch Assign Tmt Transpose Tmt Command Tmt Channel Tmt Ch Assign	receive command filter receive channel filter receive channel assign transmit transpose transmit command filter transmit channel filter transmit channel assign

<Operations>

Operation	Action
⤴ SELECT	select the filter to set
⤵ SELECT	select the filter to set
>SPECIAL	enter the special display
⤵ MODE	select a mode downward
⤴ MODE	select a mode upward
[NORMAL]	return to [NORMAL] mode

7.1 Receive Command Filter

<Function> These settings determine whether each type of MIDI message will be received or not. The MIDI messages to be echoed back are passed through this filter.

RCV COMMAND FLT	
Note Off	: ON
①	②

NO.	Item	Setting or display	Meaning	Initial setting
①	Command	Note Off Note On Poly Press Control Chg Program Chg Ch Press Pitch Bender System Ex	note off note on polyphonic pressure control change program change channel pressure pitch bender system exclusive	ON ON OFF ON ON OFF ON ON
②	Filter status	ON OFF	receive don't receive	

(Note) The Note Off filter applies to "8nH" MIDI messages, and has no effect on "9nH, V=0" MIDI messages.

<Operations>

Operation	Action
» SELECT	select the type of command
« SELECT	select the type of command
^ SELECT	set the selected command to be received
v SELECT	set the selected command not to be received
CANCEL	exit the special display

7.2 Receive Channel Filter

<Function> These settings determine whether each channel of MIDI data will be received or not. The MIDI messages to be echoed back are passed through this filter.

RCV CHANNEL FLT 123-567---111213-1516
--

①

NO.	Item	Setting or display	Meaning
①	Channel reception status	numeral -	channels with a number displayed will be received not received

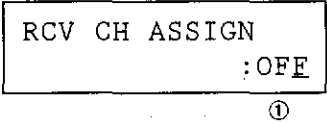
(Note) The initial settings are that all channels will be received.

<Operations>

Operation	Action
» SELECT	move the cursor to the right to select a channel
« SELECT	move the cursor to the left to select a channel
⤴ SELECT	set the selected channel to be received
⤵ SELECT	set the selected channel not to be received
CANCEL	exit the special display

7.3 Receive Channel Assign

<Function> When MIDI data is received, all data will be converted to the assigned channel before being recorded. Echoed back data is also reassigned.



NO.	Item	Setting or display	Meaning	Initial setting
①	Channel	OFF C1—C16	the channel of incoming data will not be assigned all incoming data will be assigned to this channel	OFF

<Operations>

Operation	Action
⤴ SELECT	select the assign channel
⤵ SELECT	select the assign channel
CANCEL	exit the special display

7.4 Transmit Transpose

<Function> This function allows you to shift the pitch (note number) up or down for all MIDI note messages that are transmitted.

If you specify a Pass channel, note data on that channel will not be transposed. This is convenient when one channel is transmitting drum data, in which each note number corresponds to a specific rhythm instrument, and must not be transposed.

If the result of this transposition would make a note number exceed the range of -127—+127, the note number will automatically be corrected to -127 or +127.

TMT TRANSPOSE
Offset :+000
① ②

NO.	Item	Setting or display	Meaning	Initial setting
①	Transpose setting item	Offset	specify the offset value for transposition	+000
		Pass Ch	specify the channel to be unaffected by transpose	---
②	Offset value	-127 — +127	offset value for transpose	
	Pass channel	---	all channels will be transposed	
		C1—C16	the specified channel will not be transposed	

<Operations>

Operation	Action
» SELECT	select the Pass channel
« SELECT	specify the Offset
⤴ SELECT	specify the value for the item
⤵ SELECT	specify the value for the item
CANCEL	exit the special display

7.5 Transmit Command Filter

<Function> These settings determine whether each type of MIDI command will be transmitted or not.

TMT COMMAND FLT Note On : ON

①

②

NO.	Item	Setting or display	Meaning	Initial setting
①	Command	Note On Poly Press Control Chg Program Chg Ch Press Pitch Bender System Ex	note on polyphonic pressure control change program change channel pressure pitch bender system exclusive	ON OFF ON ON OFF ON ON
②	Filter status	ON OFF	transmit don't transmit	

<Operations>

Operation	Action
» SELECT	select the type of command
« SELECT	select the type of command
⤴ SELECT	set the selected command to be transmitted
⤵ SELECT	set the selected command not to be transmitted
CANCEL	exit the special display

7.6 Transmit Channel Filter

<Function> These settings determine whether each channel of MIDI data will be transmitted or not.

TMT CHANNEL FLT
1-34567-----1213141516

①

NO.	Item	Setting or display	Meaning
①	Channel transmission status	numeral	channels with a number displayed will be transmitted not transmitted

(Note) The initial settings are that all channels will be transmitted.

<Operations>

Operation	Action
» SELECT	move the cursor to the right to select a channel
« SELECT	move the cursor to the left to select a channel
^ SELECT	set the selected channel to be transmitted
v SELECT	set the selected channel not to be transmitted
CANCEL	exit the special display

7.7 Transmit Channel Assign

<Function> By specifying a Channel Assign setting for each track, you can cause all the data of the track to be converted to the specified MIDI channel before being transmitted. MIDI data from units placed in that track will also be converted to the assign channel of that track before being transmitted.

TMT CH ASSIGN
T01 : C1

①
②

NO.	Item	Setting or display	Meaning	Initial setting
①	Track number	T01—T32	track number for which to specify an assign channel	
②	Channel	OFF C1—C16	transmit channels will not be assigned all track data will be transmitted on this channel	OFF

<Operations>

Operation	Action
» SELECT	select the track number for which to specify an assign channel
« SELECT	select the track number for which to specify an assign channel
⤴ SELECT	specify the assign channel for the selected track
⤵ SELECT	specify the assign channel for the selected track
CANCEL	exit the special display

8. [SYSTEM] mode

<Function> This is where you will make settings affecting the overall PDC-100 system, such as clock, metronome, and echo back.

One set of system settings can be saved to a disk as preset data. If a disk is inserted when the PDC-100 is turned on, the preset data will automatically be loaded, restoring the system settings.

[SYSTEM]
 Clock >

①

NO.	Item	Setting or display	Meaning
①	Type of system	Clock Metronome Others	clock metronome others

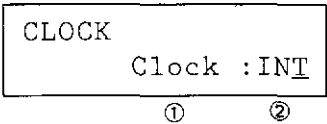
<Operations>

Operation	Action
⤴ SELECT	select Clock, Metronome, Others
⤵ SELECT	select Clock, Metronome, Others
>SPECIAL	enter the special display
⤵ MODE	select a mode downward
⤴ MODE	select a mode upward
[NORMAL]	return to [NORMAL] mode

8.1 Clock

<Function> Here you can set the timing clock of the PDC-100 to either internal or external clock, and specify whether MIDI realtime messages will be transmitted or not.

If you turn off realtime message transmission, MIDI start, continue, stop, and timing clock messages will not be transmitted even if internal clock is selected.



NO.	Item	Setting or display	Meaning	Initial setting
①	Clock setting item	Clock	set the clock to internal or external	INT
		Real Time	specify whether or not to transmit realtime messages	ON
②	Clock setting	INT EXT	internal clock external clock	
	Real Time setting	ON OFF	transmit realtime messages don't transmit realtime messages	

<Operations>

Operation	Action
» SELECT	select realtime
« SELECT	select clock
^ SELECT	specify the setting for the selected item
v SELECT	specify the setting for the selected item
CANCEL	exit the special display

8.2 Metronome

<Function> These settings determine how the metronome is sounded.

In addition to its internal beeper metronome, the PDC-100 also has a MIDI metronome function. The MIDI metronome transmits MIDI note data at regular intervals to an external keyboard, drum machine or tone module, causing it to sound at regular intervals. Since you can set the channel, high and low note numbers, and velocity of the MIDI metronome, you can set it to any desired timbre or volume so that it can be easily heard even when you are wearing headphones.

The MIDI metronome will not be transmitted while the PDC-100 is transmitting system exclusive data.

METRONOME Beeper :OFF

①
②

NO.	Item	Setting or display	Meaning	Initial setting
①	Metronome setting items	Beeper	set beeper metronome on/off	OFF
		Midi	set MIDI metronome on/off	OFF
		Channel	specify channel for MIDI metronome	C1
		Velocity	specify velocity for MIDI metronome	127
		Hi Tone	specify high note number for MIDI metronome	C+7
		Lo Tone	specify low note number for MIDI metronome	C+6
②	Settings for Beeper and Midi	OFF	don't sound metronome	
		REC	sound metronome during recording	
		R/P	sound metronome during recording and playback	
	Channel	C1—C16	transmit channel for MIDI metronome	
	Velocity	000—127	velocity for MIDI metronome	
	Note number	C-1 — G+9	note numbers for MIDI metronome	

<Operations>

Operation	Action
» SELECT	select the item to set
« SELECT	select the item to set
⤴ SELECT	specify the setting for the selected item
⤵ SELECT	specify the setting for the selected item
CANCEL	exit the special display

8.3 Others

<Function> Here you can make settings for echo back, countdown, tempo change, and click.

When Echo Back is turned on, MIDI data that is received will be immediately re-transmitted. During playback, MIDI data played back from tracks and units will be merged with the received MIDI data, and transmitted.

The MIDI data to be echoed back will pass through the receive command filter, the receive channel filter, and the receive channel assign, but is not affected by the transmit filter. System exclusive data is not echoed back.

Count Down specifies the number of measures for the countdown that occurs before realtime recording or punch recording with the internal clock.

The beat/tempo track contains beat data and tempo data. When a track is recorded or played back, the beat data can change the time signature during the song. Tempo data, on the other hand, is effective only when Tempo Change is turned on. When recording or playing back a unit, the beat and tempo data has no effect, and it is not possible to change the beat or tempo in the middle of a unit.

By turning Key Click off, you can silence the “beep” that occurs when you press a PDC-100 key and the “beep beep beep ...” that occurs to indicate an error.

OTHERS

Echo Back :OFF

①

②

NO.	Item	Setting or display	Meaning	Initial setting
①	Other system setting items	Echo Back Count Down Tempo Chg. Key Click	set echo back on/off set number of countdown measures when recording specify whether tempo data in the beat/tempo track will be obeyed or not turn key click sound on/off	OFF 2 OFF ON
②	Echo Back setting	ON OFF	echo back don't echo back	
	Count Down setting	0-8	number of measures in countdown	
	Tempo Chg. setting	ON OFF	obey tempo data in beat/tempo track don't obey tempo data in beat/tempo track	
	Key Click setting	ON OFF	sound the key click don't sound the key click	

<Operations>

Operation	Action
» SELECT	select the item to set
« SELECT	select the item to set
⤴ SELECT	specify the setting for the selected item
⤵ SELECT	specify the setting for the selected item
CANCEL	exit the special display

9. [INITIALIZE] mode

<Function> This mode allows you to initialize all song data in internal memory, or to initialize individual tracks or units.

[INITIALIZE]
Song >

①

NO.	Item	Setting or display	Meaning
①	The type of data to initialize	Song Track Unit	

<Operations>

Operation	Action
⤴ SELECT	select Song, Track, or Unit
⤵ SELECT	select Song, Track, or Unit
>SPECIAL	enter the special display
⤵ MODE	select a mode downward
⤴ MODE	select a mode upward
[NORMAL]	return to [NORMAL] mode

9.1 Song Initialize

<Function> This function initializes the entire internal memory, restoring all tracks and units to an unrecorded state, and setting the beat and tempo of the song to be newly recorded.

INITIALIZE SONG
Beat: ①/② : 120

Waiting for
confirmation

INITIALIZE SONG
- Execute ? -

During execution

INITIALIZE SONG
- EXECUTE ! -

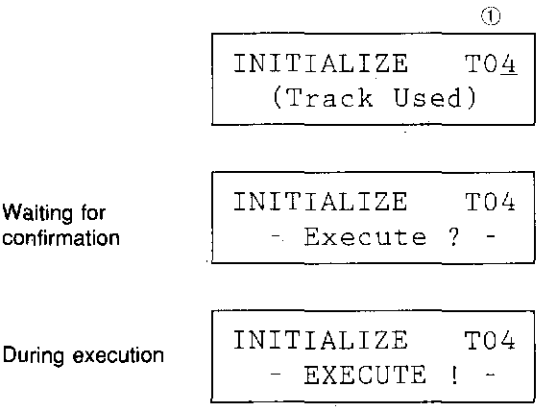
NO.	Item	Setting or display	Meaning
①	Beat	1/4—8/4	basic beat for the song to be newly recorded
②	Tempo	030—250	basic tempo for the song to be newly re- corded

<Operations>

Operation	Action
» SELECT	select the item to set
« SELECT	select the item to set
^ SELECT	specify the setting for the selected item
v SELECT	specify the setting for the selected item
EXECUTE	execute initialization
CANCEL	exit the special display

9.2 Track Initialize

<Function> This function initializes the specified track in internal memory to an unrecorded state.



NO.	Item	Setting or display	Meaning
①	Track number	T01—T32	track number to initialize

<Operations>

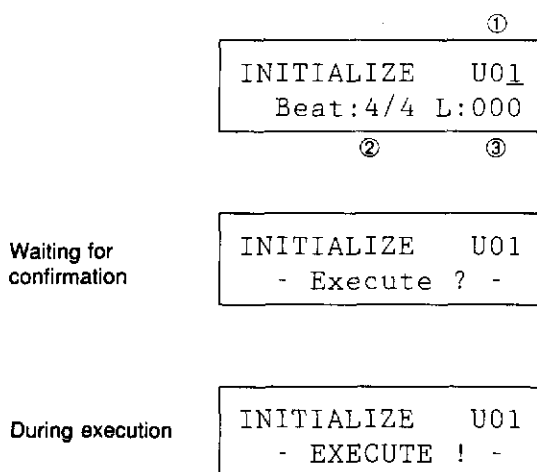
Operation	Action
⤴ SELECT	specify the track number you wish to initialize
⤵ SELECT	specify the track number you wish to initialize
EXECUTE	execute initialization
CANCEL	exit the special display

9.3 Unit Initialize

<Function> This function initializes the specified unit in internal memory to an unrecorded state, and sets the beat and number of measures for the unit to be newly recorded.

If you set the bar length to other than 000 and execute initialization, when that unit is realtime recorded, recording will automatically end when the specified number of measures is reached. If you press the ■ **STOP** key to stop recording before this point, the bar length will automatically be shortened, and set to the measure where you stopped recording. This means that if you realtime record once again, recording will stop at the measure where you previously stopped. If you set the bar length to 000 and execute initialization, you will be able to realtime record up to 100 measures.

When you wish to edit, re-record or initialize a unit that has already been placed, and it causes a change in the length of the unit, you must first use the Bar Delete function to remove the unit from the track, then do what you wish to do, and finally place the modified unit in the track again.



NO.	Item	Setting or display	Meaning
①	Unit number	U01—U64	unit number to initialize
②	Beat	1/4—8/4	beat of the unit to be newly recorded
③	Bar length	000—100	number of measures in the unit to be newly recorded

<Operations>

Operation	Action
» SELECT	select the item to set
« SELECT	select the item to set
^ SELECT	set the selected item
✓ SELECT	set the selected item
EXECUTE	execute initialization
CANCEL	exit the special display

10. [EDIT] mode

<Function> This mode provides data editing functions such as event editing and bar editing, and also allows you to record data using punch recording and step recording.

[EDIT]
 Event U23 >

① ② ③

NO.	Item	Setting or display	Meaning
①	Type of editing	Beat/Tempo Event Bar Punch Rec Step Rec Quantize Modify	beat/tempo track edit event edit bar edit punch recording step recording quantize modify
②	Track/Unit mark	T U	track unit
③	Track number Unit number	01—32 01—64	track number to edit unit number to edit

<Operations>

Operation	Action
» SELECT	move the cursor to the right, and select the type of editing or the track/unit number
« SELECT	move the cursor to the left, and select the type of editing or the track/unit number
⤴ SELECT	select the type of editing or the track/unit number
⤵ SELECT	select the type of editing or the track/unit number
>SPECIAL	when the cursor is at a track/unit number, enter the special display
⤵ MODE	select a mode downward
⤴ MODE	select a mode upward
[NORMAL]	return to [NORMAL] mode

10.1 Beat/Tempo Edit

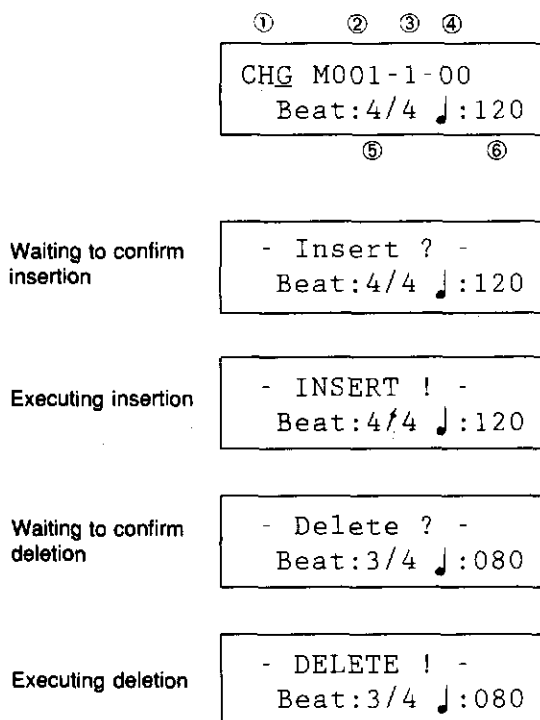
<Function> This function allows you to insert, delete, and modify beat data and tempo data at the beginning of any measure in the beat/tempo track.

The beat/tempo track contains beat data and tempo data. When a track is recorded or played back, the beat data can change the time signature during the song. Tempo data, on the other hand, is effective only when the [SYSTEM] mode setting Tempo Change is turned on. When recording or playing back a unit, the beat and tempo data has no effect, and it is not possible to change the beat or tempo in the middle of a unit. Nor is it not possible to insert beat data or tempo data into the middle (i.e., any place other than the beginning) of a measure, or at the beginning of a measure in which beat or tempo data has already been inserted.

To change (modify) the contents of beat data and tempo data, set the operation ① to CHG, move the cursor to the location point ②, and search for the beat data and tempo data you wish to modify. Then move the cursor to the parameter you wish to modify, and modify it. It is not necessary to press the **EXECUTE** key.

To delete a beat data and tempo data, set the operation ① to CHG, and search for the beat data or tempo data you wish to delete, in the same way as above. Then press the **EXECUTE** key.

To insert a beat data and tempo data, set the edit operation ① to INS, set ② to the location point where you wish to insert data, and press the **EXECUTE** key to insert beat data and tempo data. It is not possible to specify the contents of the beat data and tempo data before inserting them, so after inserting the data, you must then change the data to the desired value.



NO.	Item	Setting or display	Meaning
①	Edit operation	CHG INS	change (modify) and delete insert
②	Location point	M001—	(measure)
③	Location point	1—	(beat)
④	Location point	00—95	(resolution)
⑤	Beat	1/4—8/4	
⑥	Tempo	030—250	

<Operations>

Operation	Action
» SELECT	move the cursor, and select the item to set
« SELECT	move the cursor, and select the item to set
⌘ SELECT	set the selected item
⌘ SELECT	set the selected item
EXECUTE	execute deletion or insertion
CANCEL	exit the special display

10.2 Event Edit

<Function> This function allows you to insert, delete, or modify events at any location in a track or unit.

To change (modify) an event, set the edit operation ① to CHG, move the cursor to the location point ②—④, and search for the event you wish to modify. Then move the cursor to the parameter you wish to modify, and modify the data. It is not necessary to press **EXECUTE**.

To delete an event, set the edit operation ① to CHG, and search for the event you wish to delete, in the same way as above. Then press the **EXECUTE** key.

To insert an event, set the edit operation ① to INS, select the channel ⑤, move the cursor to the location point ②—④ into which you want to insert, specify the channel ⑤, and select the command ⑥ you wish to insert. Press **EXECUTE** and the event will be inserted. However it is not possible to specify the data of the event before inserting it, so after insertion, you must then change the data to the desired value. By using an external keyboard connected to the MIDI IN terminal, you can insert events of the desired command, channel, and data.

①	②	③	④	⑤
CHG	M001-1-00	C1		
C+4	V127	L01-57		

⑥

Waiting to confirm
insertion

- Insert ? - C1
C-1 V064 L00-76

Executing insertion

- INSERT ! - C1
C-1 V064 L00-76

Waiting to confirm
deletion

- Delete ? - C1
C+4 V127 L01-57

Executing deletion

- DELETE ! - C1
C+4 V127 L01-57

NO.	Item	Setting or display	Meaning
①	Edit operation	CHG INS	change (modify) or delete insert
②	Location point	M001—	(measure)
③	Location point	1—	(beat)
④	Location point	00—95	(resolution)
⑤	Channel	C1—C16 SE	(for system exclusive)
⑥	Note number	C-1—G+9	(for note data)
	Command	Po Press Control Program Chg Ch Press Pitch Bend	polyphonic pressure control change program change channel pressure pitch bender

● Note data

				①
				C1
F#+5 V127 L01-57				
②	③	④		

NO.	Item	Setting or display	Meaning
①	Channel	C1 — C16	
②	Note number	C-1 — G+9	
③	Velocity	V000 — V127	
④	Note length	L00-00 — L99-00	length of note

• Note number

Display	C-1...B-1	C+0...B+0	C+1...B+1	C+2...B+2	C+3...B+3
Note number	0 ...11	12 ...23	24 ...35	36 ...47	48 ...59

C+4...B+4	C+5...B+5	C+6...B+6	C+7...B+7	C+8...B+8	C+9...G+9
60 ...71	72 ...83	84 ...95	96 ...107	108 ...119	120 ...127

• Velocity

Velocity is related to keyboard dynamics as follows.

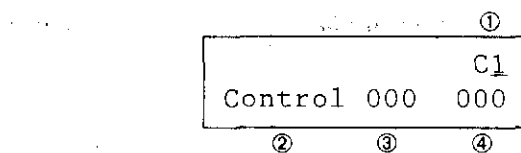


• Length

Duration \ Note value									
100% (tenuto)	L00-08	L00-12	L00-18	L00-16	L00-24	L00-36	L00-32	L00-48	L00-72
80% (normal)	L00-06	L00-09	L00-14	L00-12	L00-19	L00-28	L00-25	L00-38	L00-57
50% (staccato)	L00-04	L00-06	L00-09	L00-08	L00-12	L00-18	L00-16	L00-24	L00-36

L00-64	L01-00	L01-48	L01-32	L02-00	L03-00	L02-64	L04-00	L06-00
L00-51	L00-76	L01-19	L01-06	L01-57	L02-38	L02-12	L03-19	L04-76
L00-32	L00-48	L00-72	L00-64	L01-00	L01-48	L01-32	L02-00	L03-00

● Polyphonic pressure, Control change



NO.	Item	Setting or display	Meaning
①	Channel	C1—C16	
②	Command	Po Press Control	polyphonic pressure control change
③	Note number	C-1—G+9	(for polyphonic pressure)
	Control number	000 —127	(for control change)
④	Pressure data	000 —127	(for polyphonic pressure)
	Control data	000 —127	(for control change)

• Control numbers and control data

Control number		Contents	Control data
	0	undefined	0 — 127 upper data byte
	1	Modulation	
	2	Breath controller	
	3	undefined	
	4	Foot controller	
	5	Portamento time	
	6	Data entry	
	7	Main volume	
	8	Balance control	
	9	undefined	
	10	Pan pot	
	11	Expression	
	12 — 15	undefined	
	16 — 19	General purpose controllers	
	20 — 31	undefined	
	32 — 63	lower byte of 0 — 31	0 — 127 lower data byte
	64	Damper pedal (sustain)	0 — 127 (0:off, 127:on)
	65	Portamento	
	66	Sostenuto	
	67	Soft pedal	
	68	undefined	
	69	Hold 2	
	70 — 79	undefined	
	80 — 83	General purpose controllers	
	84 — 90	undefined	
	91	External effect depth	
	92	Tremolo depth	0 — 127 data
	93	Chorus depth	
	94	Celeste depth	
	95	Phaser depth	
	96	Data increment	
	97	Data decrement	
	98	Non-registered parameter no. lower byte	
	99	Non-registered parameter no. upper byte	
	100	Registered parameter no. lower byte	
	101	Registered parameter no. upper byte	
	102 — 121	undefined	
Mode messages	122	Local control	0:off, 127:on
	123	All note off	0
	124	Omni mode off	0
	125	Omni mode on	0
	126	Mono mode on	0 — 15
	127	Poly mode on	0

● Program change, Channel pressure, Pitch bender

		①
		C1
Program Chg	000	
②	③	

NO.	Item	Setting or display	Meaning
①	Channel	C1 — C16	
②	Command	Program Chg Ch Press Pitch Bend	program change channel pressure pitch bender
③	Program number	000 — 127	(for program change)
	Pressure data	000 — 127	(for channel pressure)
	Pitch bend data	-8192 — +8191	(for pitch bender)

(Note) Pitch bend data can also be modified in steps of 100.

● System exclusive

System exclusive data is displayed by 3 bytes at a time. By placing the cursor at the data number ① and modifying this, you can scroll through the data in steps of 3 bytes. It is only possible to modify the contents of a system exclusive message. To do so, scroll to display the desired data, and then move the cursor to ②—④ and modify it.

				SE
0000	092	126	002	
①	②	③	④	

NO.	Item	Setting or display	Meaning
①	Data number	0000 —	move forward or backward in 3-byte steps through the data displayed in ② ③ ④
②	Exclusive data	000 — 127 END ---	the databyte of the data number the end of the data no data
③	Exclusive data	000 — 127 END ---	the databyte of the data number + 1 the end of the data no data
④	Exclusive data	000 — 127 END ---	the databyte of the data number + 2 the end of the data no data

<Operations>

Operation	Action
» SELECT	move the cursor, and select the item to set
« SELECT	move the cursor, and select the item to set
^ SELECT	set the selected item
∨ SELECT	set the selected item
EXECUTE	execute deletion or insertion
CANCEL	exit the special display

10.3 Bar Edit

<Function> These functions allow you to insert or delete measures at any location of a track or unit, and also to copy groups of measures, insert units, etc.

It is not possible to place a unit into another unit. When you wish to edit, re-record or initialize a unit that has already been placed, and it causes a change in the length of the unit, you must first use the Bar Delete function to remove the unit from the track, then do what you wish to do, and finally place the modified unit in the track again.

①	②	③
DELETE	T01-M001	
(Data)		L001

NO.	Item	Setting or display	Meaning
①	Edit operation	DELETE INSERT COPY PLACE	delete bar insert bar copy bar place unit
②	Track number Unit number	T01—T32 U01—U64	track number for bar editing unit number for bar editing
③	Location point	M001—	first measure to edit

<Operations>

Operation	Action
» SELECT	move the cursor, and select the item to set
« SELECT	move the cursor, and select the item to set
⤴ SELECT	set the selected item
⤵ SELECT	set the selected item
EXECUTE	execute the bar edit operation
CANCEL	exit the special display

10.3.1 Bar Delete

<Function> This function allows you to delete specified measures at the specified location in a track or unit.

The track or unit will become shorter by the deleted length.

If a unit had been placed in the portion that was deleted, the delete number length ④ will change in steps of the unit measure length.

①

②

DELETE T01-M005
(Data) L004

③

④

Waiting for confirmation

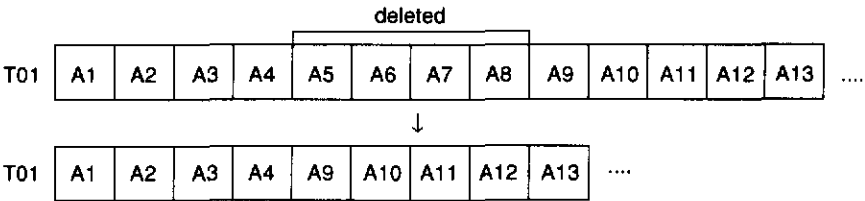
DELETE T01-M005
-Execute?- L004

During execution

DELETE T01-M005
-EXECUTE!- L004

NO.	Item	Setting or display	Meaning
①	Track number	T01—T32	track number from which to delete measures
	Unit number	U01—U64	unit number from which to delete measures
②	Location point (measure)	M001—	first measure to delete
③	Contents of first measure	(No Data) (Data) (Unit**)	there is no data data exists a unit has been placed (**: unit number)
④	Delete bar length	L001—	number of measures to delete

● Executing the Bar Delete operation as shown in the above display would have the following result.



10.3.2 Bar Insert

<Function> This function allows you to insert blank measures in the specified location of a track or unit. The track or unit will be lengthened by the inserted length. For an unrecorded track or unit, insertion is possible only at location point M001.

① ②

INSERT T01-M004
L003

③

Waiting for
confirmation

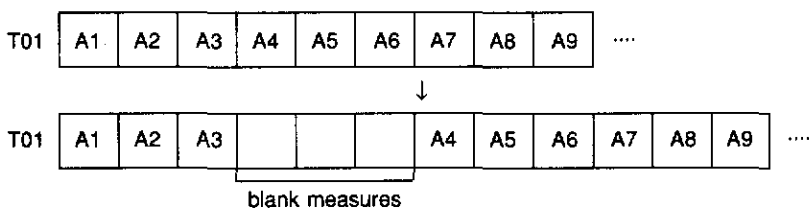
INSERT T01-M004
-Execute?- L003

During execution

INSERT T01-M004
-EXECUTE!- L003

NO.	Item	Setting or display	Meaning
①	Track number Unit number	T01—T32 U01—U64	track number into which to insert unit number into which to insert
②	Location point	M001—	first measure of insertion
③	Insert bar length	L001—	number of measures to insert

- Executing the Bar Insert operation as shown in the above display would have the following result.



10.3.3 Bar Copy

<Function> This function allows you to copy measures from the same or another track or unit into the specified location of a track or unit. The track or unit will be lengthened by the copied length. For an unrecorded track or unit, copying is possible only at location point M001.

Copy is not possible in the following situations.

1. If a unit has been placed in the copy range of the source track.
2. If the source track/unit and destination track/unit are the same, and the location point is the same as the first copy measure.
3. If the source track/unit and destination track/unit are the same, and the location point is within the copy range.
4. If executing the Bar Copy operation would make the track or unit exceed the maximum length of measures.

	①	②
COPY	T01-M004	
T02-M001		L003
③ ④	⑤	⑥

Waiting for
confirmation

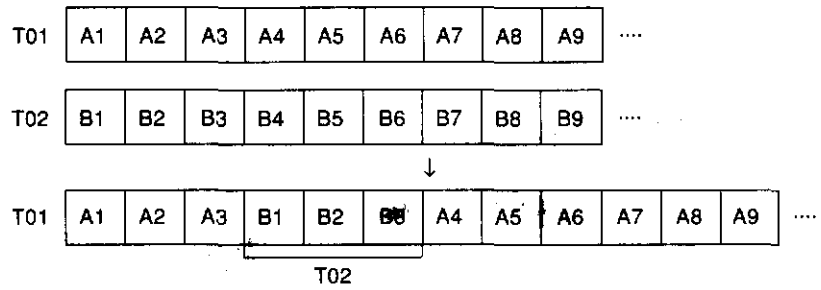
COPY	T01-M004
T02	-Execute? -

During execution

COPY	T01-M004
T02	-EXECUTE! -

NO.	Item	Setting or display	Meaning
①	Track number Unit number	T01—T32 U01—U64	track number of copy destination unit number of copy destination
②	Location point	M001—	first measure to copy and insert
③	Track/Unit mark	T U	
④	Track number Unit number	01—32 01—64	track number of copy source unit number of copy source
⑤	Measure number	M001—	first measure of source track/unit to copy
⑥	Copy bar length	L001—	number of measures to copy
	Warning messages	Unit E Posit. Source Emp.	a unit has been placed in the copy area of the source track the copy position is set incorrectly the source track/unit has not been recorded

- Executing the Copy operation as shown in the above display would have the following result.



10.3.4 Unit Place

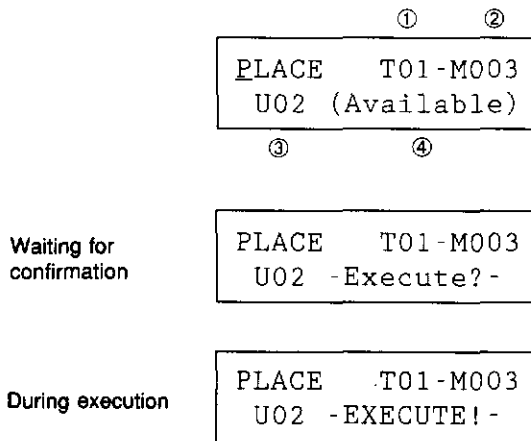
<Function> This function allows you to insert a unit into a specified location in a track. The track will be lengthened by the length of the source unit. Unlike the Bar Copy function, this Unit Place function is only to refer to the unit number, and therefore does not significantly consume internal memory.

A unit can be placed in an unrecorded track only at location point M001.

When you wish to edit, re-record or initialize a unit that has already been placed, and it causes a change in the length of the unit, you must first use the Bar Delete function to remove the unit from the track, then do what you wish to do, and finally place the modified unit in the track again.

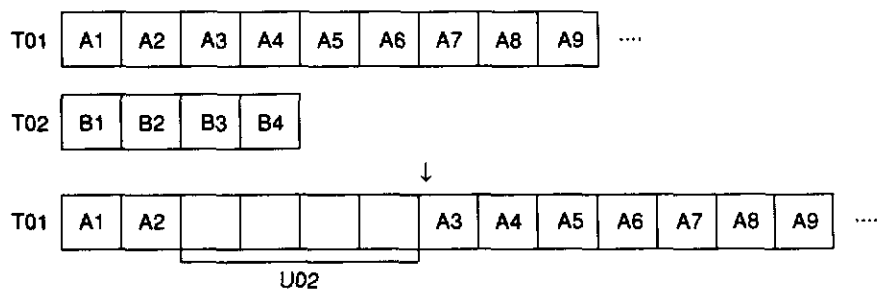
Unit Place is not possible in the following situations.

1. Placing a unit into a unit.
2. When executing Unit Place would make the track longer than the maximum length of measures.



NO.	Item	Setting or display	Meaning
①	Track number	T01—T32	destination track number in which to place the unit.
②	Location point	M001—	starting measure at which to place.
③	Unit number	U01—U64	unit number of unit to place in the track.
④	Warning messages	(Available) Source Emp. Over Length	placement is possible the source unit has not been recorded the source unit has too many measures

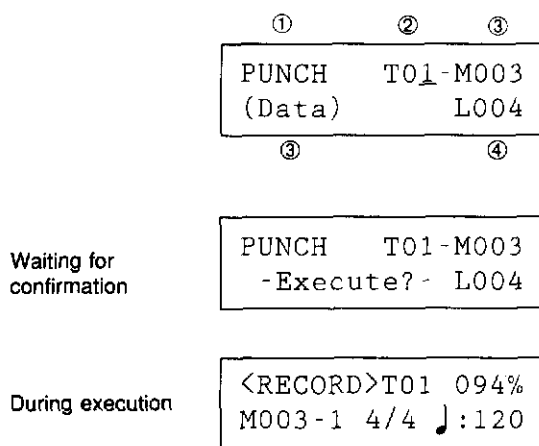
- Executing the Unit Place operation as shown in the above display would have the following result.



10.4 Punch Recording

<Function> This function allows you to punch record (realtime record) from a specified location in a track or unit.

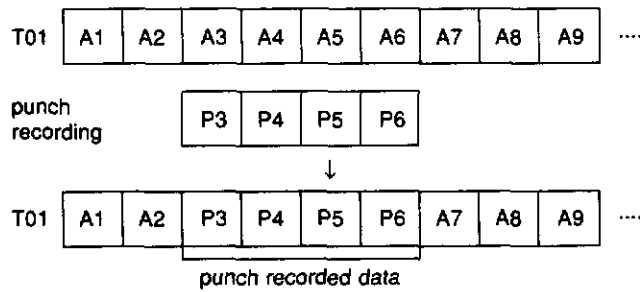
It is not possible to punch record an unrecorded track or unit. When you use punch record, the measures of the original track or unit will be deleted beginning from the location point and extending to the measure length, and the newly recorded measures will be inserted. If you press ■ **STOP** to stop recording before the specified recording bar length ends, the measure length of the track or unit will become shorter. If the PDC-100 has been set to internal clock, there will be a countdown for the number of measures specified in [SYSTEM] mode.



NO.	Item	Setting or display	Meaning
①	Track number Unit number	T01—T32 U01—U64	
②	Location point	M001—	measure to start punch recording
③	Contents of starting measure	(No Data) (Data) (Unit**)	there is no data data exists a unit has been placed (**: unit number)
④	Recording bar length	L001—	number of measures to punch record

(Note) During punch recording, you can stop by pressing the ■ **STOP** key or the **CANCEL** key.

- Executing Punch Recording as shown in the above display would have the following result.



<Operations>

Operation	Action
» SELECT	move the cursor, and select the item to set
« SELECT	move the cursor, and select the item to set
⤴ SELECT	set the selected item
⤵ SELECT	set the selected item
EXECUTE	execute punch recording
CANCEL	exit the special display

10.5 Step Recording

<Function> This function allows you to step record from the specified location of a track or unit. You can input note numbers using an external keyboard connected to the MIDI IN terminal. It is not possible to record data other than note data. The measures you record will be inserted at the location point. Measures following the location point will be moved backward according to the number of inserted measures, and the track or unit will accordingly become longer.

When you press the **EXECUTE** key once, the recording sign ① will change from OFF to REC and step recording will begin. Move the cursor and set parameter values for channel ⑤, recording step ⑥ ⑦, velocity ⑧, and duration ⑨. On the external keyboard, press and hold the note you wish to record, and then press the **EXECUTE** button. The note data will be recorded, and the location point will advance by the amount of the recording step. To enter a chord, press and hold several notes, and then press the **EXECUTE** button. To enter a rest, press the **EXECUTE** key while no notes are being played on the external keyboard.



















In order to step record, press the keys of the external keyboard connected to the PDC-100 after the recording sign ① changes from OFF to REC. The sound of any keys which are pressed when the recording sign ① is OFF will not be recorded, even if the **EXECUTE** key has been pressed.

If you make a mistake, exit Step Recording, and use Bar Delete to delete only the measure containing the mistake. Then use step recording to rerecord from the beginning of that measure, or use the Event Edit function.










	①	②	③	④	⑤
	OFF M005-1-00 C10				
	S16(-) V127 080%				
	⑥	⑦	⑧	⑨	
Waiting for execution	REC M005-1-00 C10				
	S16(-) V127 080%				
During execution	REC M005-1-00 C10				
	- EXECUTE ! -				










NO.	Item	Setting or display	Meaning
①	Recording sign	OFF REC	standing by for step recording step recording
②	Location point	M001—	(measure)
③	Location point	1—	(beat)
④	Location point	00—95	(resolution)
⑤	Channel	C1— C16	
⑥	Recording step 1	1, 2, 4, 8, 16, 32	basic note value for step recording
⑦	Recording step 2	(-) (3) (*)	triplet dotted note
⑧	Velocity	V000 —V127	
⑨	Duration	010%—200%	length of note data in proportion to the recording step

● Recording step

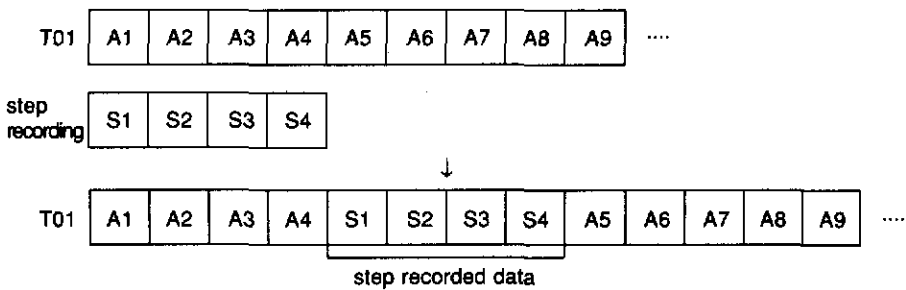
Recording step 1 \ Recording step 2	32	16	8	4	2	1
(-)						
(3)						
(*)						

● Duration

Note value Duration									
100%(tenuto)	L00-08	L00-12	L00-18	L00-16	L00-24	L00-36	L00-32	L00-48	L00-72
80%(normal)	L00-06	L00-09	L00-14	L00-12	L00-19	L00-28	L00-25	L00-38	L00-57
50%(staccato)	L00-04	L00-06	L00-09	L00-08	L00-12	L00-18	L00-16	L00-24	L00-36

								
L00-64	L01-00	L01-48	L01-32	L02-00	L03-00	L02-64	L04-00	L06-00
L00-51	L00-76	L01-19	L01-06	L01-57	L02-38	L02-12	L03-19	L04-76
L00-32	L00-48	L00-72	L00-64	L01-00	L01-48	L01-32	L02-00	L03-00

● Step Recording four measures from the above display would have the following result

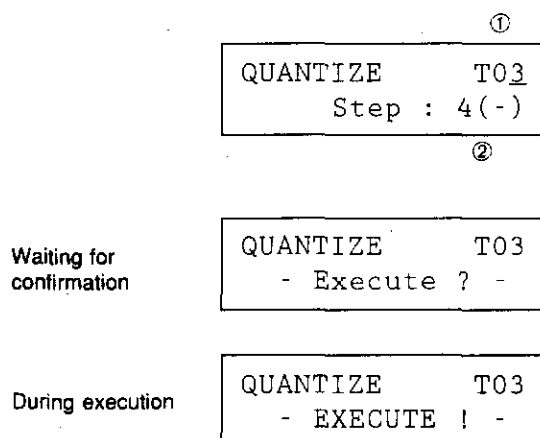


<Operations>

Operation	Action
» SELECT	move the cursor, and select the item to set
« SELECT	move the cursor, and select the item to set
⤴ SELECT	set the selected item
⤵ SELECT	set the selected item
EXECUTE	begin step recording. record note data, and advance the location point by the recording step.
CANCEL	exit the special display, end step recording







10.6 Quantize

<Function> This function corrects the timing of events in a track or unit to the nearest specified quantization step. When the Quantize function is executed on a track, units placed in a track being quantized will not be affected.

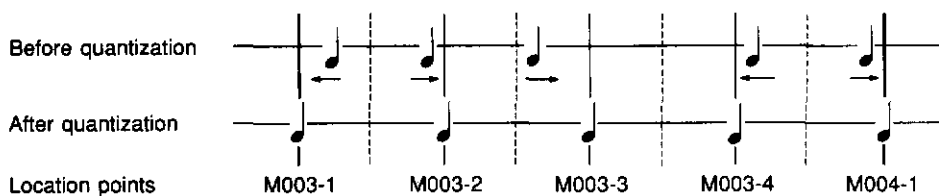


NO.	Item	Setting or display	Meaning
①	Track number Unit number	T01—T32 U01—U64	track number to quantize unit number to quantize
②	Quantize step	4(-), 8(-), 8(3), 16(-), 16(3), 32(-)	basic note value for quantization

● Quantize step

Note value						
Quantization step	32(-)	16(3)	16(-)	8(3)	8(-)	4(-)

- Executing the Quantize function with the settings in the above display would have the following results. (Quantize:Step=4(-))

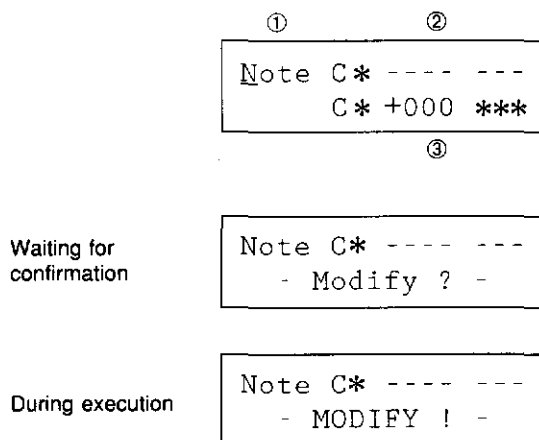


<Operations>

Operation	Action
» SELECT	move the cursor, and select the item to set
« SELECT	move the cursor, and select the item to set
^ SELECT	set the selected item
∨ SELECT	set the selected item
EXECUTE	execute quantization
CANCEL	exit the special display

10.7 Modify

<Function> This function allows you to modify all occurrences of a specified event by track or unit in one operation. Each type of MIDI command is modified separately. When the Modify function is executed on a track, unit events that have been placed in the track will not be affected.



NO.	Item	Setting or display	Meaning
①	Command	Note Drum Poly Pres Cntl Chg Program Change Channel Press Pitch Bender	note data drum data (note data) polyphonic pressure control change program change channel pressure pitch bender
②	Target data		event data to be modified
③	Result data		condition or result of modification

● Note data

Modify note data. The channel can be converted, the note number can be transposed, or the velocity can be set, converted, or expanded.

● Drum data (note data)

Modify note data such as drum data, in which each note number has a different percussion instrument assigned to it. The channel can be converted, note numbers can be converted, or the velocity converted or expanded.

	①	②	④	⑥
Note	C*	----	---	
	C*	+000	***	
	③	⑤	⑦	

NO.	Item	Setting or display	Meaning
①	Command	Note Drum	note data drum data (note data)
②	Target channel	C* C1— C16	all channels will be modified channel to be modified
③	Result channel	C* C1— C16	channel numbers will not be modified channel after modification
④	Target note number (for Note)	----	all note numbers will always be modified (cannot be set)
	Target note number (for Drum)	**** C-1— G+9	all note numbers will be modified note number to be modified
⑤	Result note number (for Note)	-127— +127	offset value to transpose
	Result note number (for Drum)	**** C-1— G+9	note numbers will not be modified note number after modification
⑥	Target velocity	---	all velocities will always be modified (cannot be set)
⑦	Result velocity	127, 112, 096, 080, 064, 048, 032, 016, 000 MAX 8/1, 4/1, 2/1 *** 1/2, 1/4, 1/8 MIN	modified to the specified value modified to 127 modified to 8 times, 4 times, or 2 times the original value velocity will not be modified modified to 1/2 times, 1/4 times, or 1/8 times the original value modified to 000

● Polyphonic pressure

Modify polyphonic pressure data. The channel can be converted, the note number converted, or the pressure data expanded.

● Control change

Modify control change data. The channel can be converted, the control number converted, or the control data expanded.

①	②	④	⑥
Poly	C*	****	---
Pres	C*	****	***
③	⑤	⑦	

NO.	Item	Setting or display	Meaning
①	Command	Poly Pres Cntl Chg	polyphonic pressure control change
②	Target channel	C* C1— C16	all channels will be modified channel to be modified
③	Result channel	C* C1— C16	channel numbers will not be modified channel after modification
④	Target note number (for Poly Pres)	**** C-1— G+9	all note numbers will be modified note number to be modified
	Target control number (for Cntl Chg)	*** 000-127	all control numbers will be modified control number to be modified
⑤	Result note number (for Poly Pres)	**** C-1— G+9	note numbers will not be modified note number after modification
	Result control number (for Cntl Chg)	*** 000 —127	control numbers will not be modified control number after modification
⑥	Target pressure data (for Poly Pres)	---	all pressure data will always be modified (cannot be set)
	Target control data (for Cntl Chg)	---	all control data will always be modified (cannot be set)
⑦	Result pressure data (for Poly Pres)	MAX 8/1, 4/1, 2/1 *** 1/2, 1/4, 1/8 MIN	modified to 127 modified to 8 times, 4 times, or 2 times the original value pressure data will not be modified modified to 1/2 times, 1/4 times, or 1/8 times the original value modified to 000
	Result control data (for Cntl Chg)	MAX 8/1, 4/1, 2/1 *** 1/2, 1/4, 1/8 MIN	modified to 127 modified to 8 times, 4 times, or 2 times the original value control data will not be modified modified to 1/2 times, 1/4 times, or 1/8 times the original value modified to 000

- Program change
Modify program change data. The channel can be converted, or the program number can be converted.
- Channel pressure
Modify channel pressure data. The channel can be converted, or the pressure data can be expanded.
- Pitch bender
Modify pitch bender data. The channel can be converted, or the pitch bend data can be expanded.

	①	②	④
Program	C*	***	
Change	C*	***	
	③	⑤	

NO.	Item	Setting or display	Meaning
①	Command	Program Change Channel Press Pitch Bender	program change channel pressure pitch bender
②	Target channel	C* C1— C16	all channels will be modified channel to be modified
③	Result channel	C* C1— C16	channel numbers will not be modified channel after modification
④	Target program number (for Program Change)	*** 000 —127	all program numbers will be modified program number to be modified
	Target pressure data (for Channel Press)	---	all pressure data will always be modified (cannot be set)
	Target pitch bender data (for Pitch Bender)	---	all pitch bender data will always be modified (cannot be set)
⑤	Result program number (for Program Change)	*** 000 —127	program numbers will not be modified program number after modification
	Result pressure data (for Channel Press)	MAX 8/1, 4/1, 2/1 *** 1/2, 1/4, 1/8 MIN	modified to 127 modified to 8 times, 4 times, or 2 times the original value pressure data will not be modified modified to 1/2 times, 1/4 times, or 1/8 times the original value modified to 000
	Result pitch bend data (for Pitch Bender)	MAX 8/1, 4/1, 2/1 *** 1/2, 1/4, 1/8 MIN	positive (+) values will be modified to +8191, and negative (-) values will be modified to -8191 modified to 8 times, 4 times, or 2 times the original value pitch bend data will not be modified modified to 1/2 times, 1/4 times, or 1/8 times the original value modified to +0000

<Operations>

Operation	Action
» SELECT	move the cursor to select the item to set
« SELECT	move the cursor to select the item to set
⤴ SELECT	set the selected item
⤵ SELECT	set the selected item
EXECUTL	execute modification
CANCEL	exit the special display

11. [DISPLAY] mode

<Function> This mode displays the incoming MIDI data. After passing through the receive command filter, receive channel filter, and receive channel assign, the last- received MIDI data will be displayed.

- No data has been received

[DISPLAY]
 - Not Received -

- Note data has been received

[DISPLAY]
① C2

B#+5
② V127
③ OFF
④

NO.	Item	Setting or display	Meaning
①	Channel	C1— C16	
②	Note number	C-1— G+9	
③	Velocity	V000 —V127	
④	Note on/off sign	ON OFF (→Note)	note on note off

(Note) The "OFF" display in ④ will appear for a MIDI message of either "8nH" or "9nH, V=0".

- Polyphonic pressure
- Control change
- Program change
- Channel pressure
- Pitch bender

events received will be displayed the same as in event edit (see page 52).

- System exclusive has been received

[DISPLAY] System Exclusive

- Song position pointer has been received

[DISPLAY] Song Posit. 0032

①

NO.	Item	Setting or display	Meaning
①	Position data	0000—	song position data

<Operations>

Operation	Action
⌵ MODE	select a mode downward
⌶ MODE	select a mode upward
[NORMAL]	return to [NORMAL] mode

12. Messages

12.1 Warning messages

Warnings are not errors, and you can continue operation even after one of these messages appears.

● Edit-related warnings

-- Data Empty --

Display	Meaning
-- Data Empty --	Since the track or unit has not been recorded, editing is not possible.
- End Of Data -	Since the end of the data has been reached, editing is not possible.
- Unit** Exist -	Since a unit has been placed, editing is not possible. (**: unit number)
-- Bar Full --	Since the track or unit has reached the maximum number of measures, editing is not possible.
-- No Data --	It is not possible to edit measures where no data exists.

● Disk-related warnings

-Load Directory-

Display	Meaning
-Load Directory-	The song file directories are being loaded from disk.
- Load Preset -	Preset data is being loaded from disk.
-Load IPL Prog.-	The IPL program is being loaded from disk.
-- Song Empty --	There is no song data on disk.

12.2 Error messages

If an error occurs, press the **CANCEL** key to return to the previous condition.

[ERROR]
== No Disk ==

Display	Meaning
== No Disk ==	A disk is not inserted.
= Disk Changed =	The disk was exchanged while it was being accessed. (→CAUTION 1)
=Disk Protected=	The disk is write protected.
= Disk R/W Err.=	A disk read or write error has occurred. (→CAUTION 2)
= Illegal Disk =	A disk for a different device was inserted.
== Disk Full ==	The disk is full.
== Song Full ==	The disk cannot hold any more songs.
= Memory Full =	The internal memory is full.
=Clock Not Come=	Clock messages are not being received.
= Rcv.Buf.Full =	The receive buffer is full, and data can no longer be received.
== Code (**) ==	Other errors. (**: error code)

(CAUTION 1): Do not remove disks while the access lamp is lit, otherwise the data on the disk may be damaged and re-formatting may be required.

(CAUTION 2): This message may appear when a disk for a different device or an un-formatted disk is inserted.

13. Specifications

(1) Internal memory

Note capacity : maximum 21,000 notes
Song capacity : 1 song file

(2) Disk

Storage medium : 3.5 inch floppy disk (1DD or 2DD)
Note capacity : maximum 39,400 notes
Song capacity : maximum 32 song files

(3) Song

Tracks : 32 tracks (each track can record 16 channels, maximum 999 measures per track), 1 Beat/Tempo track
Units : 64 units (maximum 100 measures per unit)

(4) Recording methods

- Realtime recording
- Step recording
- Punch recording

(5) Editing functions

- Bar edit
- Event edit
- Quantize
- Modify

(6) Display

: 2-line 16-character LCD with backlight

(7) Tempo

: ♩ =30—250

(8) Beat

: 1/4, 2/4, 3/4, 4/4, 5/4, 6/4, 7/4, 8/4

(9) Resolution

: ♩ /96

(10) Synchronization

: MIDI

(11) Control terminals

: MIDI IN, MIDI OUT

(12) Power supply

: AC adaptor (7.5 V, 1 A)
Current consumption : maximum 1 A
Dimensions : 258 (W) x 210 (D) x 53.8 (H) mm
Weight : 1.1 kg

14. MIDI implementation

14.1 Transmission

- **System common messages**

These messages are transmitted only when the PDC-100 is set to internal clock. However, even if the external clock is selected, system common messages that are received will be re-transmitted if the echo back switch is turned on.

Song position

<u>Status</u>	<u>2nd byte</u>	<u>3rd byte</u>
F2H	xxH	yyH
xx = lower byte: 00H—7FH (0—127)		
yy = upper byte: 00H—7FH (0—127)		

When ►►FWD, ◀◀REW, ►►END, or ◀◀RESET are pressed, the song position will be transmitted.

- **System realtime messages**

These messages are transmitted only when the PCD-100 is set to internal clock. However, even if the external clock is selected, system realtime messages that are received will be re-transmitted if the echo back switch is turned on. When real time messages are turned off in [SYSTEM] mode, these are not transmitted.

Timing clock

<u>Status</u>
F8H

This message is transmitted during playback, during the countdown, and during realtime recording.

Start

<u>Status</u>
FAH

This message is transmitted when playback or realtime recording is started from the beginning (i.e., the location point after ◀◀RESET) of the song.

Continue

<u>Status</u>
FBH

This message is transmitted when playback or realtime recording is started from a location other than the beginning (i.e., the location point after ◀◀RESET) of the song.

Stop

Status
FCH

This message is transmitted when playback or realtime recording is stopped.

14.2 Reception

- System common messages

These messages are recognized only when the PDC-100 is set to external clock and playback is stopped in normal mode.

Song position

<u>Status</u>	<u>2nd byte</u>	<u>3rd byte</u>
F2H	xxH	yyH

xx = lower byte: 00H—7FH (0—127)
yy = upper byte: 00H—7FH (0—127)

If the PDC-100 is set to external clock, the location will move to the point specified by the song position message.

- System realtime messages

These messages are recognized only when the PDC-100 is set to external clock.

Timing clock

Status
F8H

When the PDC-100 is set to external clock, incoming timing clock messages will determine its playback tempo.

Start

Status
FAH

When this message is received while the PDC-100 is set to external clock, it will start playback or realtime recording from the beginning of the song (i.e., the location point after ◀◀ RESET).

Continue

Status
FBH

When this message is received while the PDC-100 is set to external clock, it will begin playback or realtime recording from the current location point.

Stop

Status
FCH

When this message is received while the PDC-100 is set to external clock, it will stop playback or realtime recording.

MIDI Implementation Chart

Date: JUN. 1990

Version: 1.0

MODEL PDC-100

Function		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1-16 x	1-16 x	
Mode	Default Messages Altered	mode 1 :Omni ON/OFF.Poly.Mono: *****	mode 1 x	
Note Number	: True Voice:	0-127 *****	0-127	
Velocity	Note On Note OFF	○ x 9nH,v=0	○ x 9nH,v=0;8nH	
After Touch	Key's Ch's	○ ○	○*1 ○*1	
Pitch Bend		○	○*1	
	0-121	○	○*1	
Control Change				
Prog Change	: True#	○ *****	○*1	
System Exclusive		○	○*1	
Common	: Song Pos : Song Sel : Tune	○ x x	○*2 x x	
System Real Time	:Clock :Commands:	○ ○	○*2 ○*2	
Aux	:Local ON/OFF :All Notes OFF:	○ ○	x x	
Mes- Sages	:Active Sense :Reset	○ x	○ x	
Notes *1 : can be set *2 : receives only when set to external clock				
Mode 1: OMNI ON, POLY Mode 2: OMNI ON, MONO ○:Yes Mode 3: OMNI OFF, POLY Mode 4: OMNI OFF, MONO x:No				

brother®